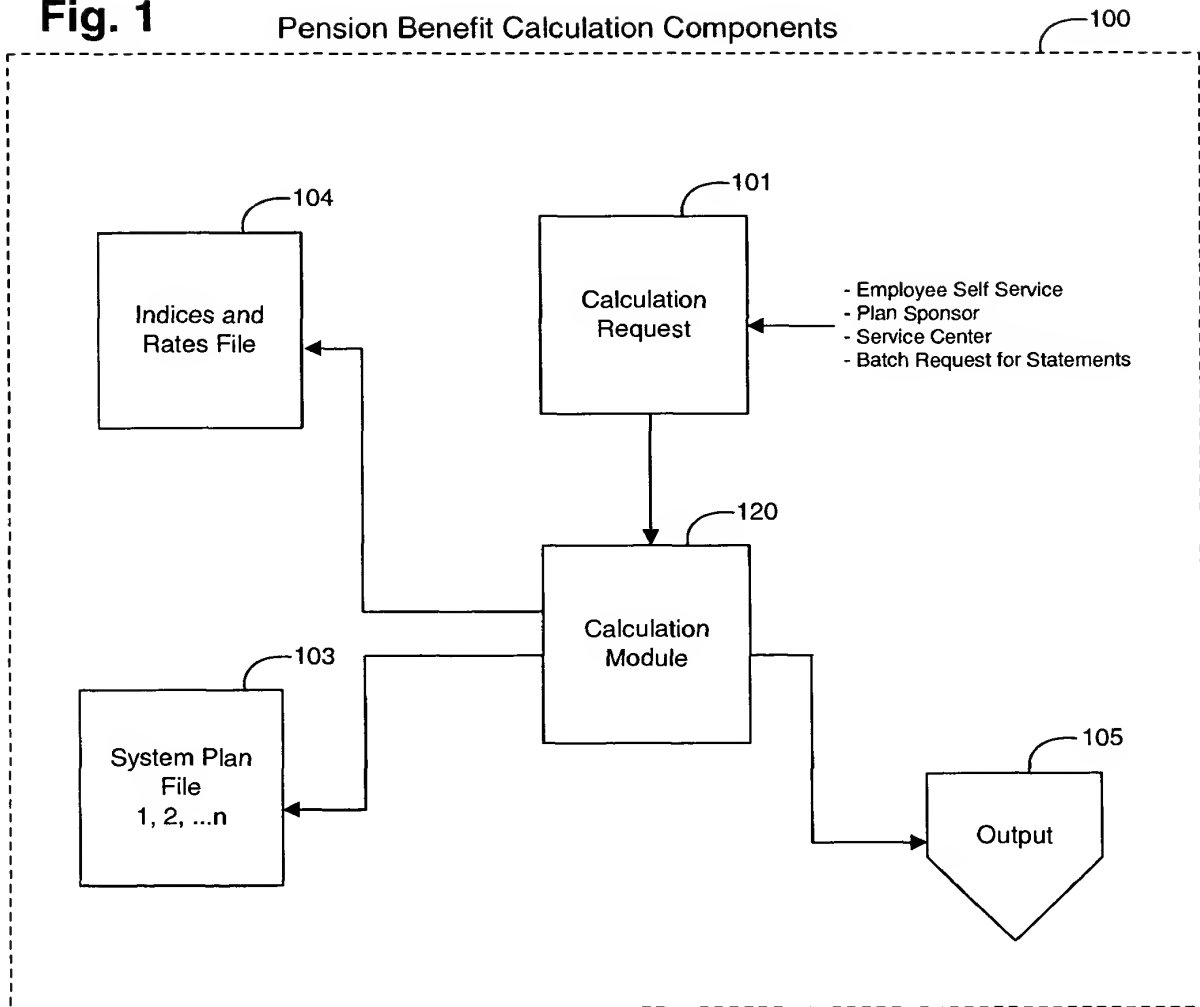
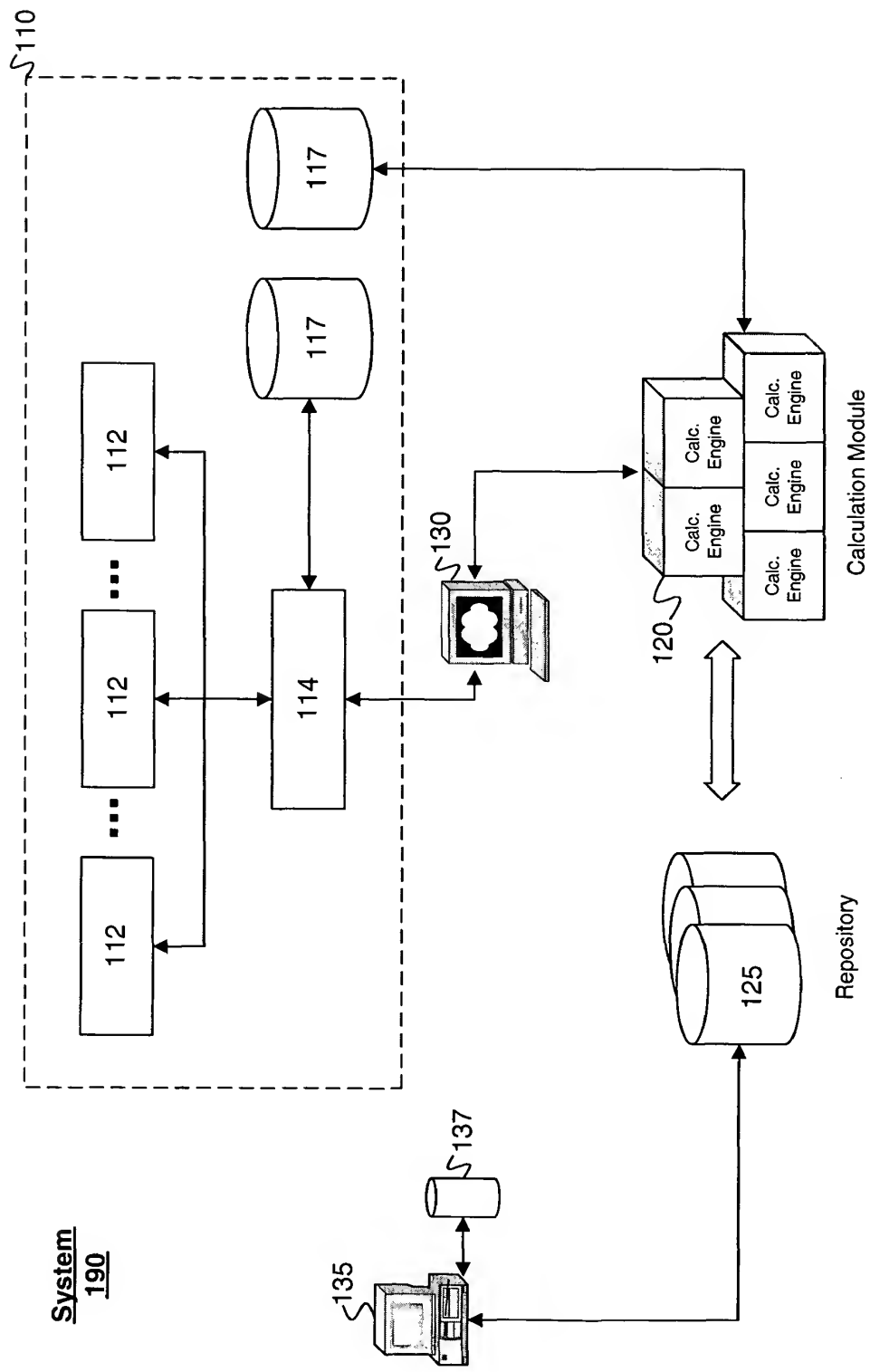


**Fig. 1**

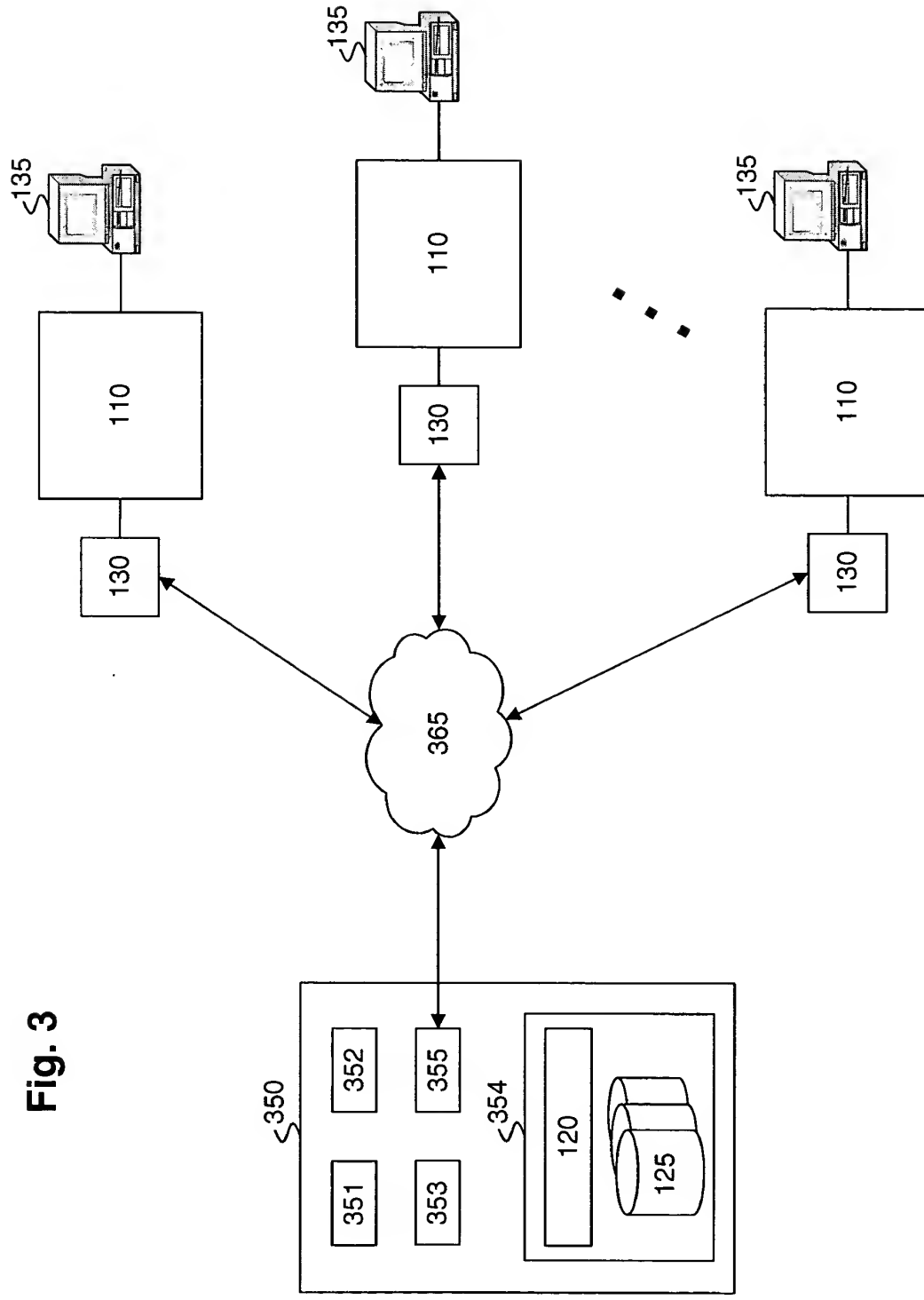
Pension Benefit Calculation Components

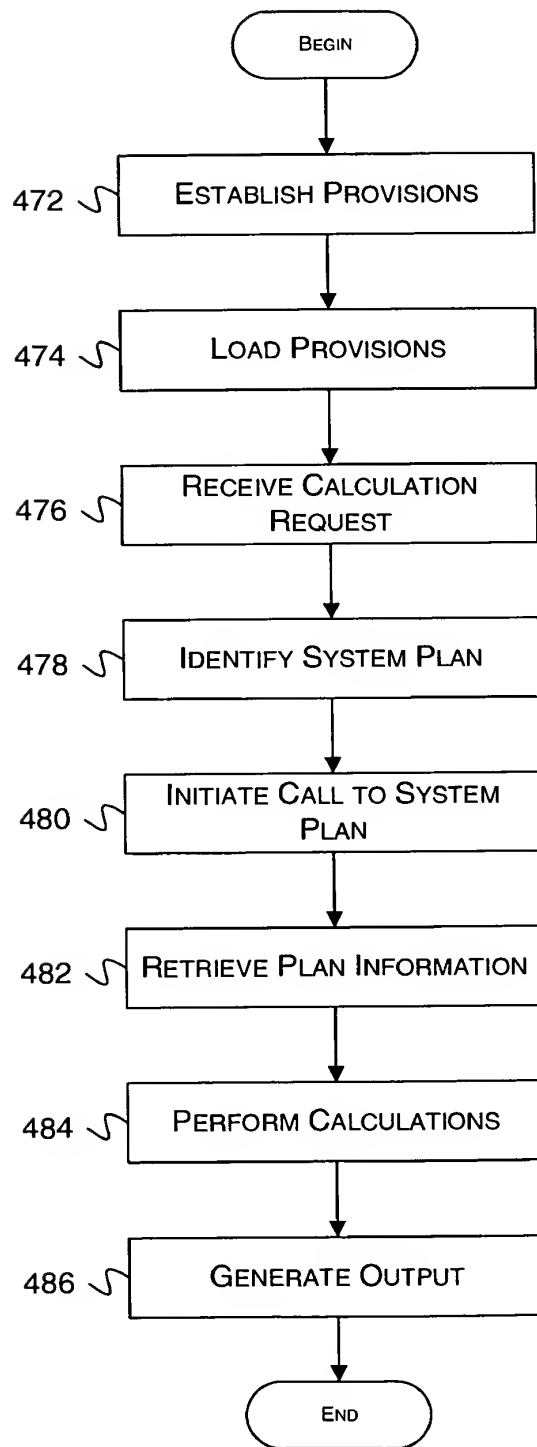




**Fig. 2**

Fig. 3

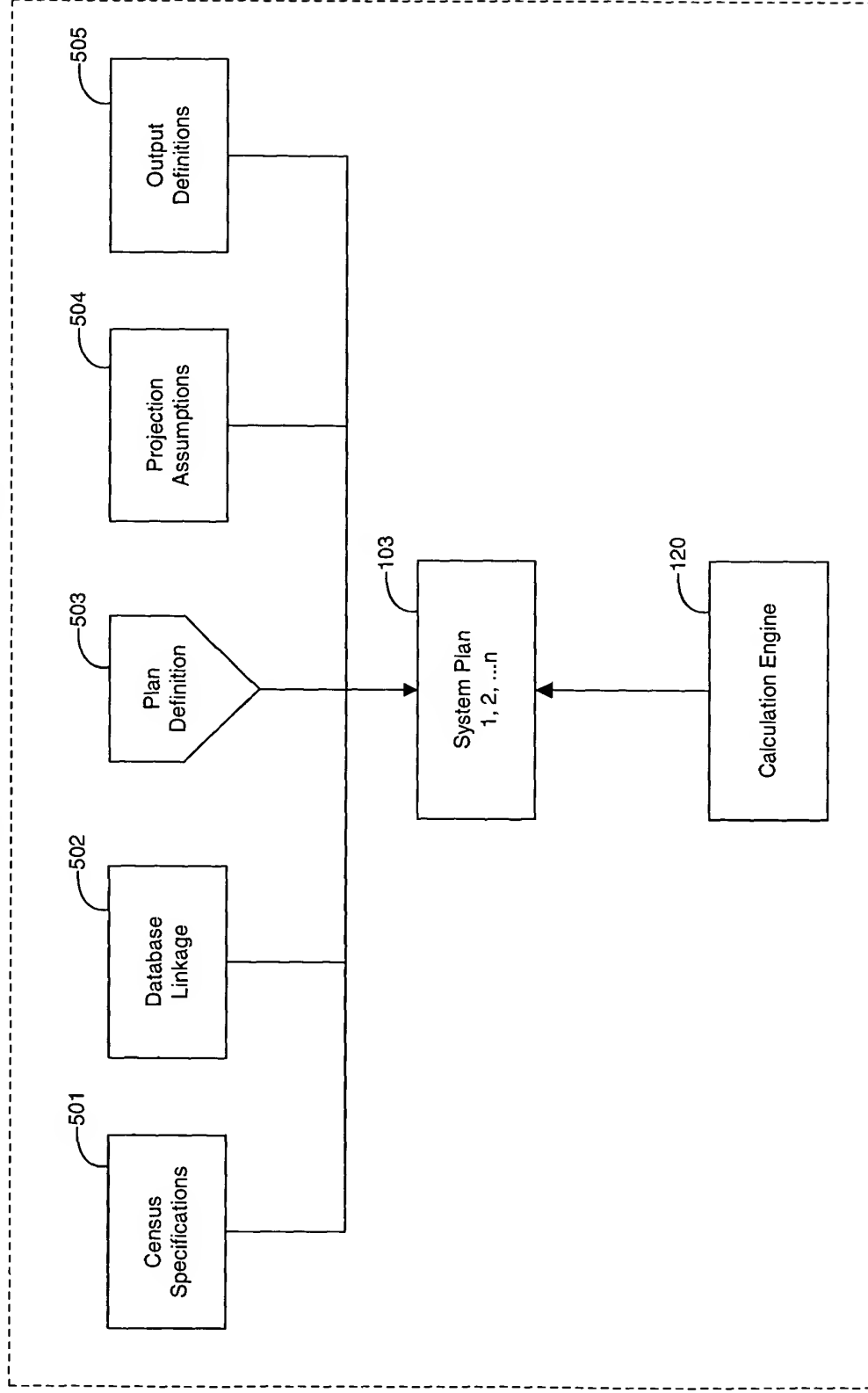




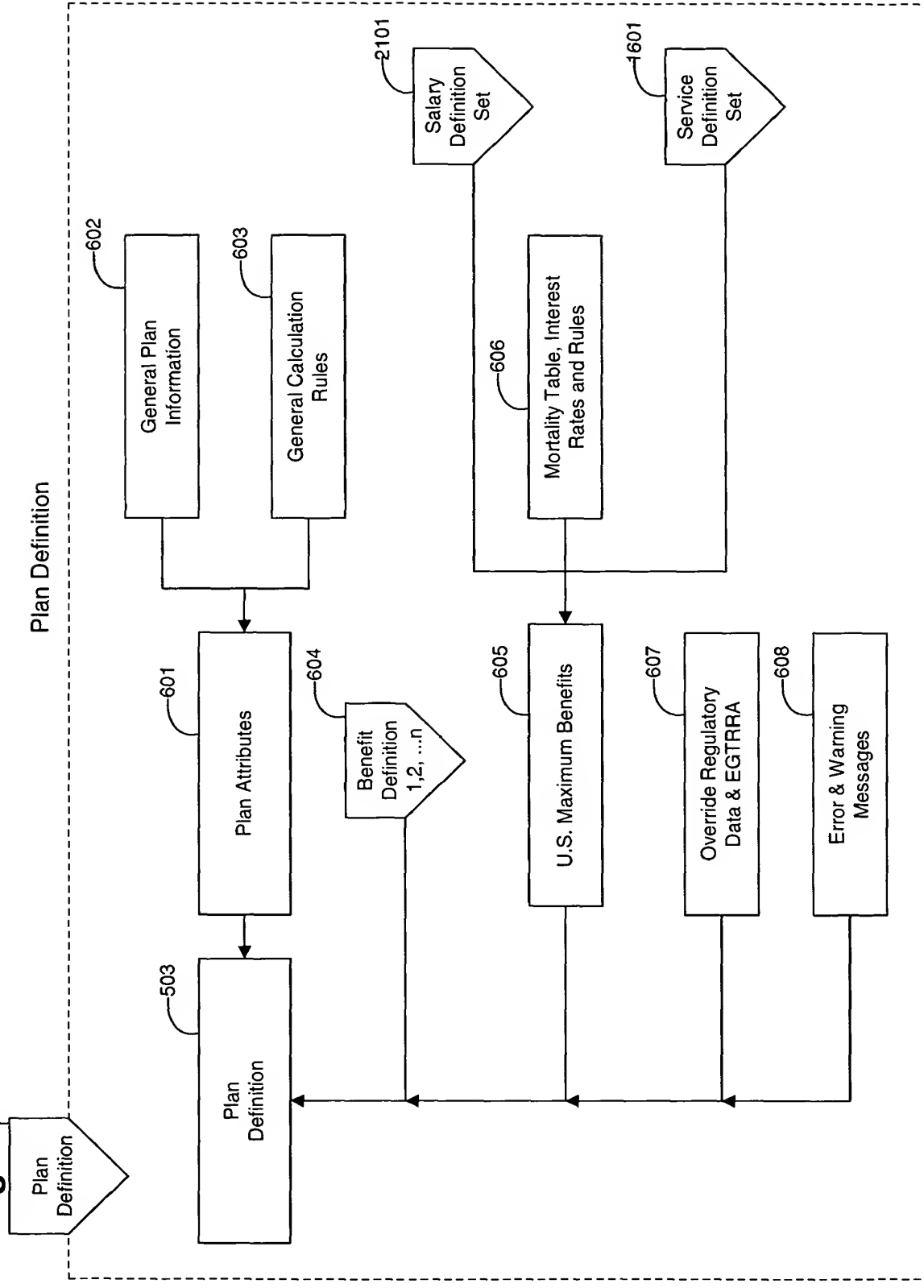
**Fig. 4**

**Fig. 5**

**Defined Benefit Calculation Engine**



**Fig. 6**

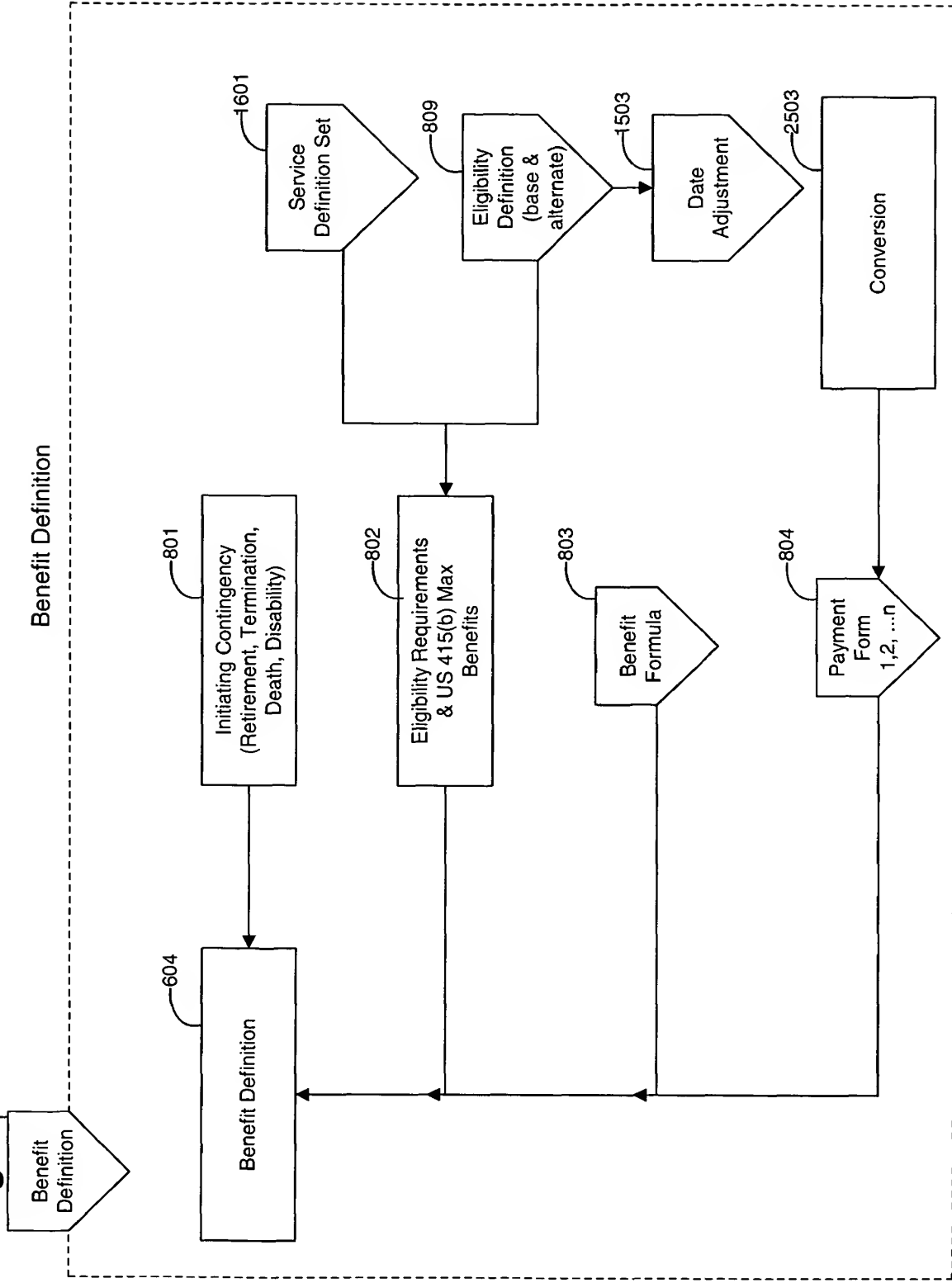


### Sample XML Output File

```
<CALC_RSLT>
  <HEADER>
    <RUN_ID>123</RUN_ID>
    <CALC_TYPE>1</CALC_TYPE>
  </HEADER>
  <RESULTS>
    <SSN>123456789</SSN>
    <MEMBER>
      ***
      <NRD>2030-09-01</NRD>
      <DOP>1984-07-02</DOP>
      <BENEFICIARY_TYPE>0</BENEFICIARY_TYPE>
      <DOT>
        <TERM>2001-12-31</TERM>
        <BEN_SVC>17.417</BEN_SVC>
        <VST_SVC>17</VST_SVC>
        <ACD>
          <CMNCMT_DT>2002-08-01</CMNCMT_DT>
          <AGE_AT_ACD>62</AGE_AT_ACD>
          <FOA>
            <FOA_CODE>YL</FOA_CODE>
            <YRS_CERTAIN>10</YRS_CERTAIN>
            <FOA_PCT>0</FOA_PCT>
            <FOA_AMT>3376.08</FOA_AMT>
          </FOA>
        </ACD>
      </DOT>
    </MEMBER>
  </RESULTS>
</CALC_RSLT>
```

**Fig. 7**

**Fig. 8**



**Table 1 - Expression Language**

**Arithmetic Operators** (a is the left argument, b is the right)

**+, -, \*, /**

Add, subtract, multiply, divide

**a \*\* b**

Raise a to the b power

**#ABS b**

Absolute value of b

**#CEILING b**

Rounds b up to next integer

**a #DIV b**

a divided by b; 0 if b is 0

**#EXP b**

Raise e (2.718281828...) to the b power

**#FLOOR b**

Round b down to next integer

**#INT b**

Truncate the fractional part of b

**#LN b**

Natural log of b

**Fig. 9A**

a #LOG b

Base-a log of b

a #MAX b

Maximum of a and b

a #MIN b

Minimum of a and b

a #MOD b

Remainder of b/a (modulo)

a #ROUND b

Rounds b to the decimal place specified by a. If a is omitted b is rounded to the nearest integer:

Examples:

#ROUND 123.456 is 123

2 #ROUND 123.456 is 123.46

-1 #ROUND 123.456 is 120

#SIGN b

-1 if b is negative, 1 if b is positive, 0 if b is 0

a #ZMINUS b

a minus b, not less than 0

**Fig. 9B**

## Date Arithmetic

12/31/1992

Example of a date constant (December 31, 1992)

3y2m15d

Example of a duration (3 years, 2 months, 15 days)

#BEGMTH b

This operator returns the date of the first day of the month in which date b falls.

a #DATEMINUS b

Subtracts duration b from date a.

Example:

To determine approximate date of hire from service at 1/1/95:

1/1/95 #DATEMINUS (1y \* Svc95)

a #DATEPLUS b

Adds duration b to date a.

Example:

If normal retirement date is defined as age 65:

DOB #DATEPLUS 65y

a #MONTHDIF b

Difference between dates a and b, in decimal months

a #YEARDIF b

Difference between dates a and b, in decimal years.

Example:

To determine hire age from dates of birth and hire:

DOH #YEARDIF DOB

**Fig. 9C**

#DAY b

Extracts day from date b

#MONTH b

Extracts month from date b

#YEAR b

Extracts year from date b

#BEGMTH b

Date on the beginning of the month in which date b falls

#ENDMTH b

Date on the end of the month in which date b falls

#NEXTBEGMTH b

Date on the beginning of the month coincident with or next following date b

a #MONTHROUND b

Date b rounded up or down to the start of an a-month period

Periods:

12=annual, 6=semi-annual, 3=quarter, 1=month

Rounds up if  $a > 0$ ; down if  $a < 0$ .

For example:

12 #MONTHROUND b rounds to the start of the next year;

-3 #MONTHROUND b rounds (down) to the start of the current quarter.

-1 #MONTHROUND b is #BEGMTH b.

**Fig. 9D**

#DAYOFWEEK b

**#DAYOF WEEK b**

This operator returns an integer for the day of the week for date b.

Returns: 1=Monday, 2=Tuesday, 3=Wednesday, 4=Thursday, 5=Friday, 6=Saturday, 7=Sunday

**#DAYSINMTH b**

The number of days in the month containing date b (recognizes leap years).

**a #LSTBUSDAY b**

The last business day of the period (specified by a) containing date b.

Periods:

1=calendar year, 2=plan year, 3=semi-calendar year, 4=semi-plan year, 5=calendar year quarter,

6=plan year quarter, and 7=month

**#ENDMTH b**

Date of the last day of the month in which date b falls.

**#NEXTBEGMTH b**

Date of the first day of the month coincident with or next following date b.

**Fig. 9E**

Relational Operators (return 1 for True, 0 for False)	
=, <, >	Equal to, less than, greater than
<>	Not equal
<=	Less than or equal
>=	Greater than or equal
a #IN b	<p>Evaluates if a is in the list of values b, returns 1 if a occurs in list b or 0 if it is not in list b.</p> <p>a = database field</p> <p>b= parenthesized list of values separated by commas, as in (10, 20, 30) or ('SMITH', 'JONES').</p> <p>Character values are patterns: 'SM*' and '*ERS' match values beginning with SM and ending with ERS.</p> <p>Case differences are ignored (ABC vs. abc).</p> <p>The values " and ' ' match blank.</p>
a #NOTIN b	<p>Evaluates if a is not in the list of values b, returns 1 if a is not in the list b or 0 if it occurs in list b.</p> <p>a = database field</p> <p>b= parenthesized list of values separated by commas, as in (10, 20, 30) or ('SMITH', 'JONES').</p> <p>Character values are patterns: 'SM*' and '*ERS' match values beginning with SM and ending with ERS.</p> <p>Case differences are ignored (ABC vs. abc).</p> <p>The values " and ' ' match blank.</p>

**Fig. 9F**

## Logical Operators

**a #AND b**

Returns 1 if both a and b are true

**#NOT b**

Returns 1 if b is 0, returns 0 if b is 1

**a #OR b**

Returns 1 if either or both of a or b are true

## Miscellaneous

**:=**

Assignment, Used to as in  $T := A+B+C$ , which assigns T the sum of A, B, and C

**&**

Statement separator.

Used as in:

$T := A+B+C$  &

$U := T/(T+1)$  &

$U * D$

The overall result of the expression is the last statement.

**pattern**

Used with #IN and #NOTIN. May be a simple name, as in 'JONES', or may include the wildcard (\*) character, as in 'JO\*', which matches any value beginning with 'JO'.

**Fig. 9G**

**#MV**

Missing value marker.

**a #OVERRIDE b**

Overrides the expression b with the value in the database field component a if a is not missing (i.e.≠#MV)

**#SUBSET**

A Selection expression that selects records chosen by the Subset Selection command. All of these operators may be used with database fields of the numeric, date, and coded type. To compare values of a character database field, however, you must use the #IN and #NOTIN operators.

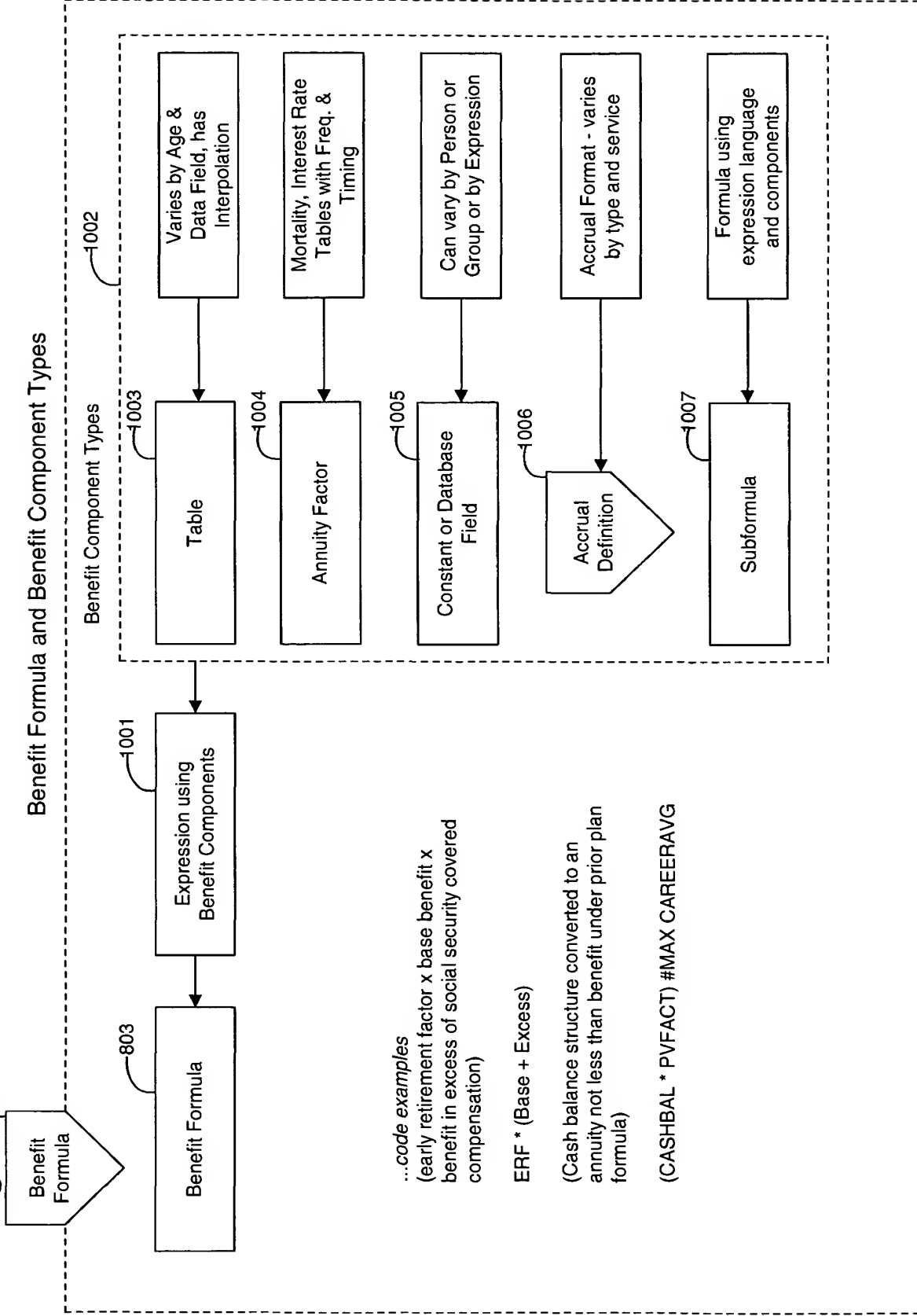
**#THIS**

Value of the item you are working with.

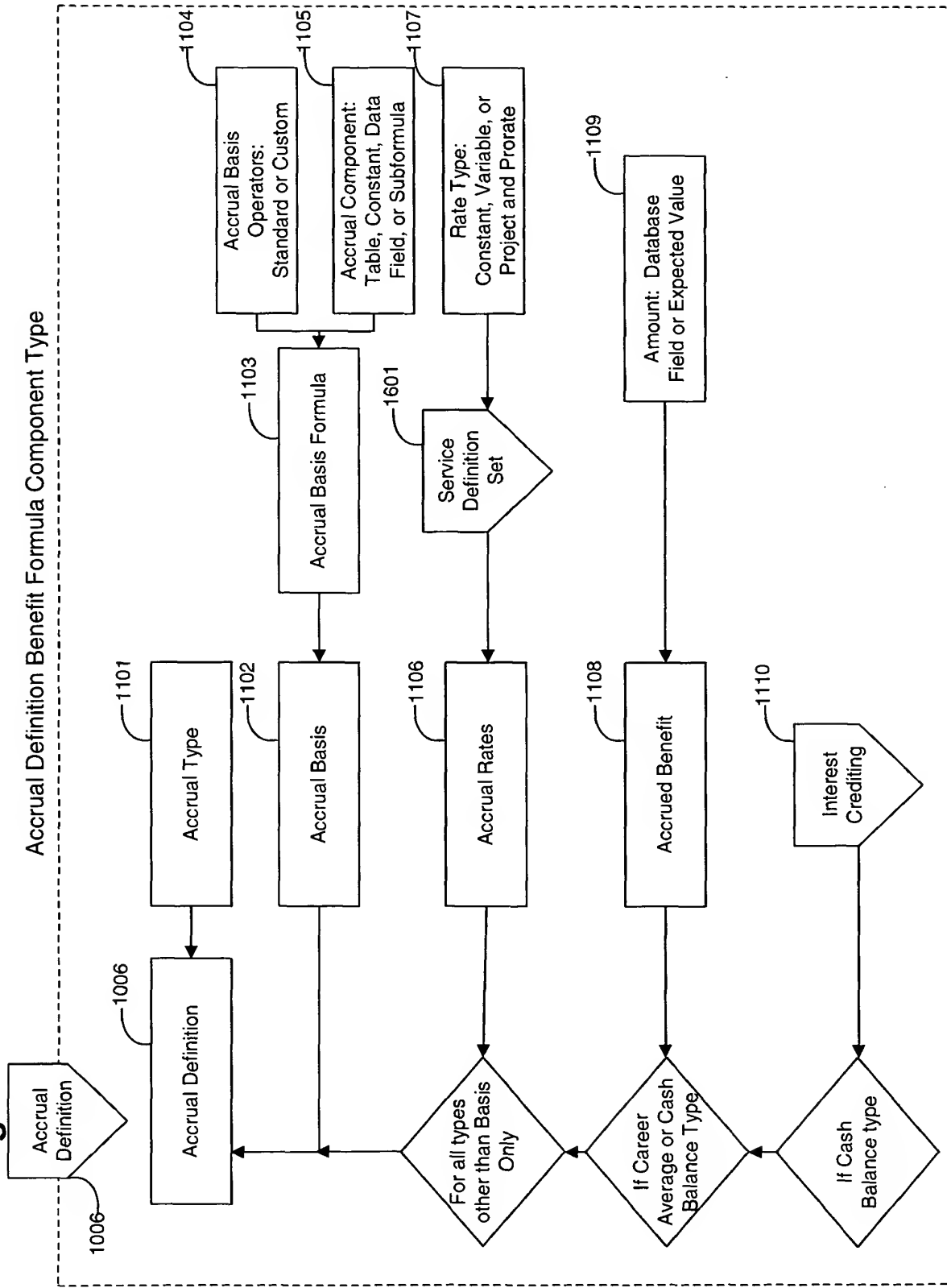
For example, in a date adjustment expression, #THIS represents the date you are adjusting. In a transformation expression #THIS represents the data field you are transforming.

**Fig. 9H**

**Fig. 10**—803



**Fig. 11**



## Table 2 – Accrual Basis Operators

### #AVGWB n

This operator returns the n-year average of the United States Social Security wage base.

### #CVCP

This operator returns the United States covered compensation, with projection.

### n #FAS m

This operator returns the highest consecutive n year final average salary out of the last m years.

### #MAXSAL

This operator returns the U.S. Internal Revenue Code Section 401(a) maximum salary for qualified plans.

### #MAXBEN

This operator returns the U.S. Internal Revenue Code Section 415(b) maximum benefit deferred to Age.

### #PIA

This operator returns the Social Security Primary Insurance Amount at the member's Social Security Normal Retirement Age. The assumption in the calculation is that the member will receive level salaries after decrement

### #SALARY

This operator returns the member's salary, limited to the U.S. Internal Revenue Code Section 401(a) maximum salary.

### #SERVICE

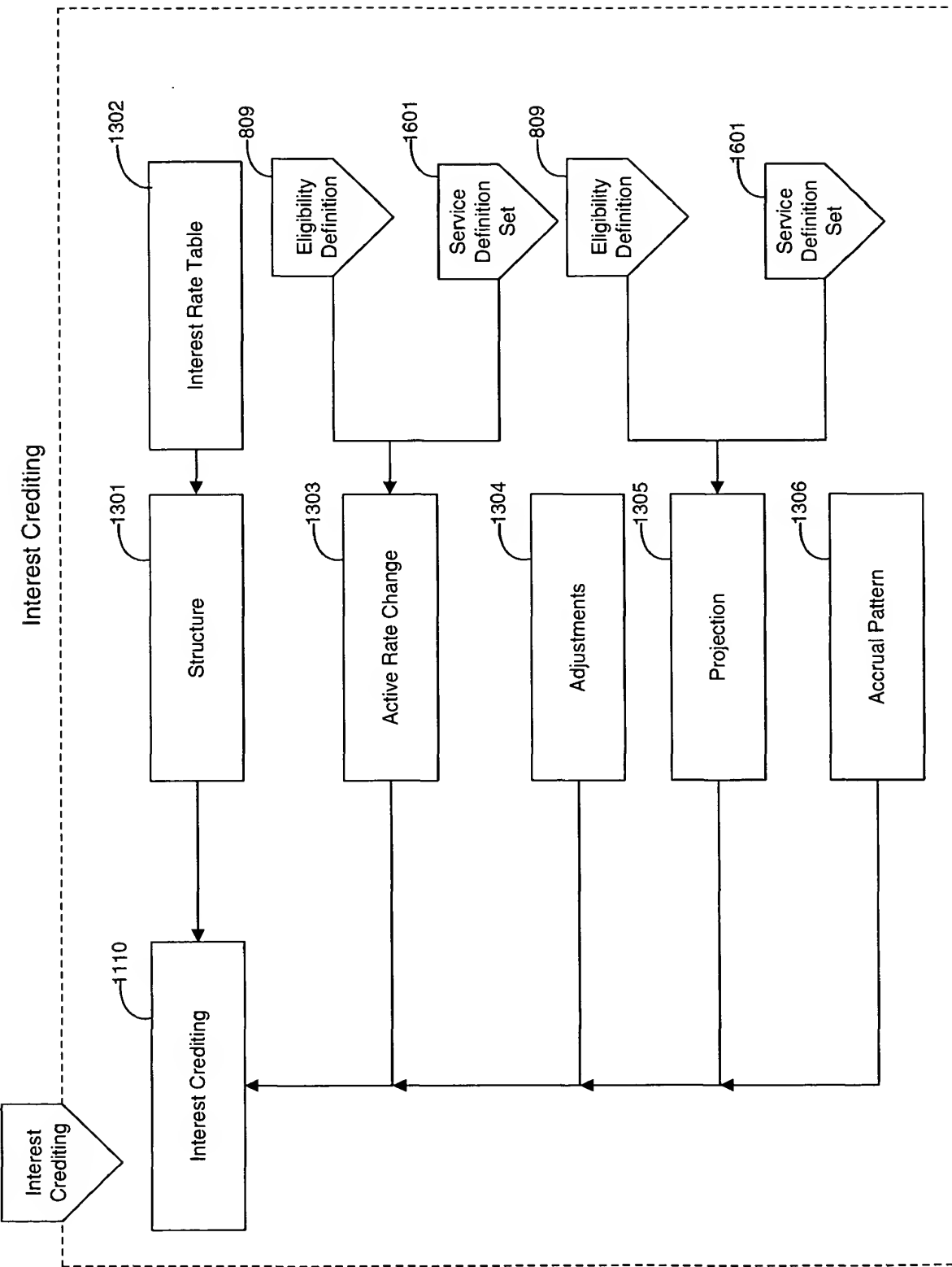
This operator returns a service adjusted accrual basis component. The service is the base service calculation defined in the Census Specifications.

### #SSWB

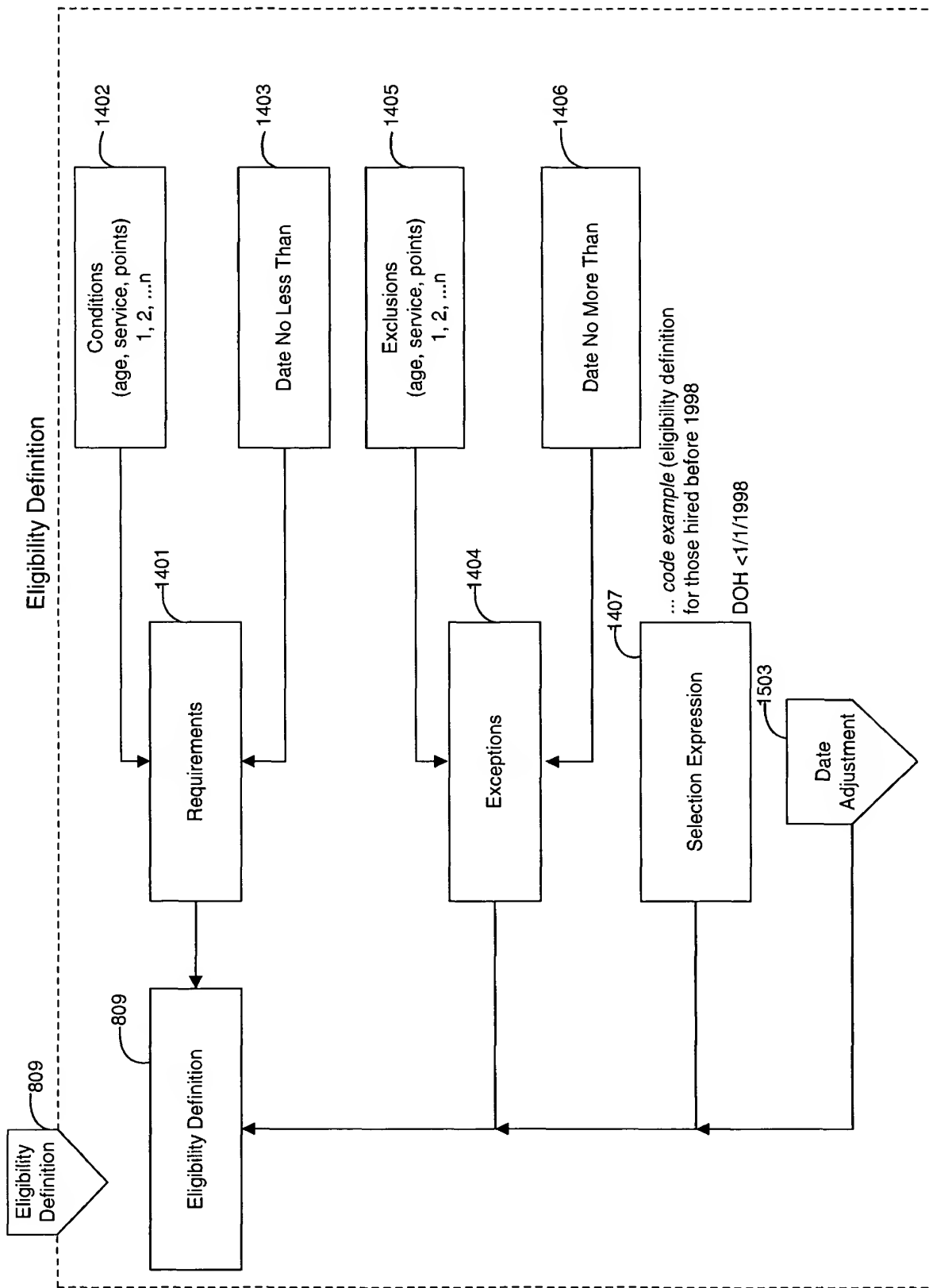
This operator returns the United States Social Security taxable wage base

**Fig. 12**

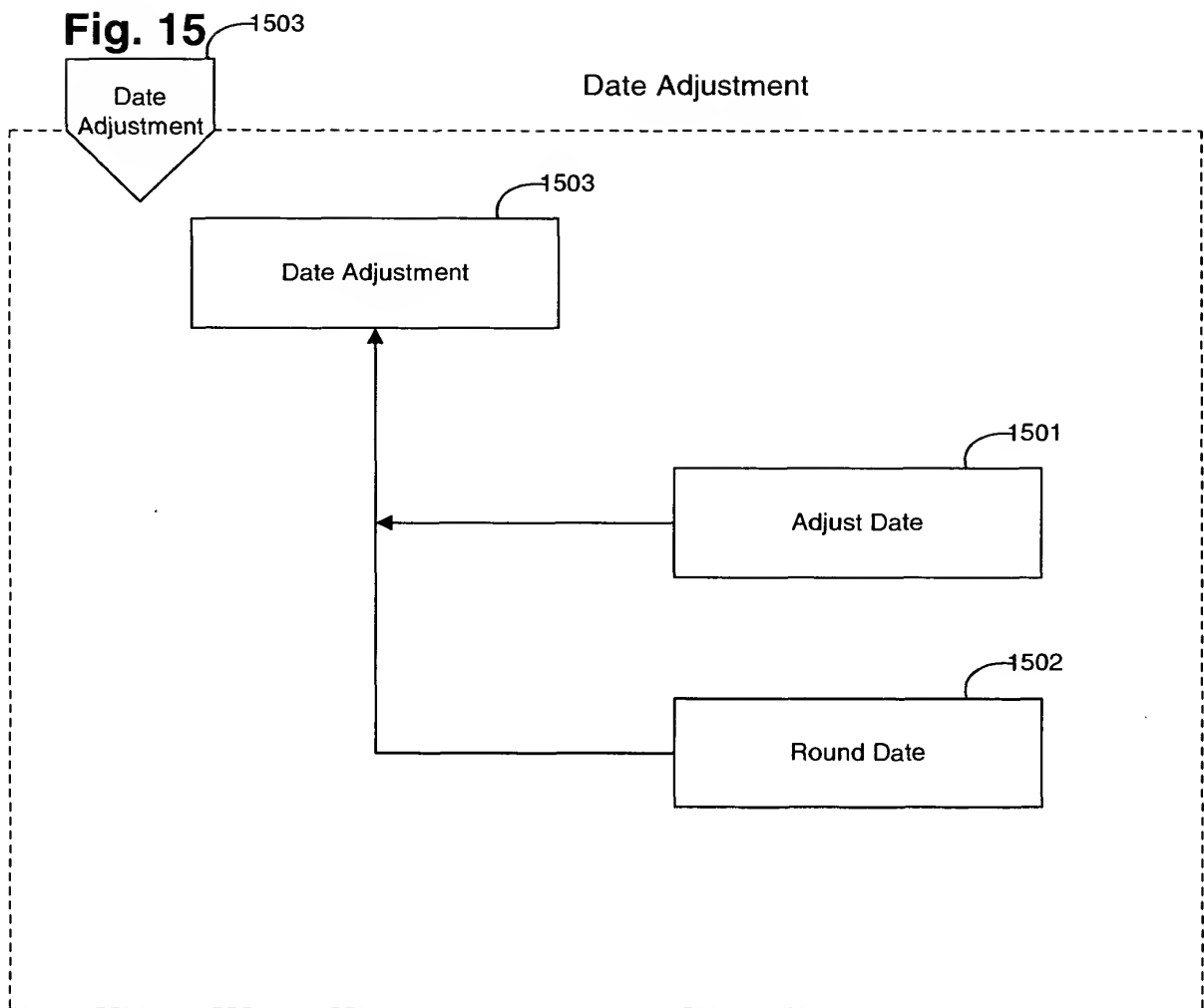
**Fig. 13**



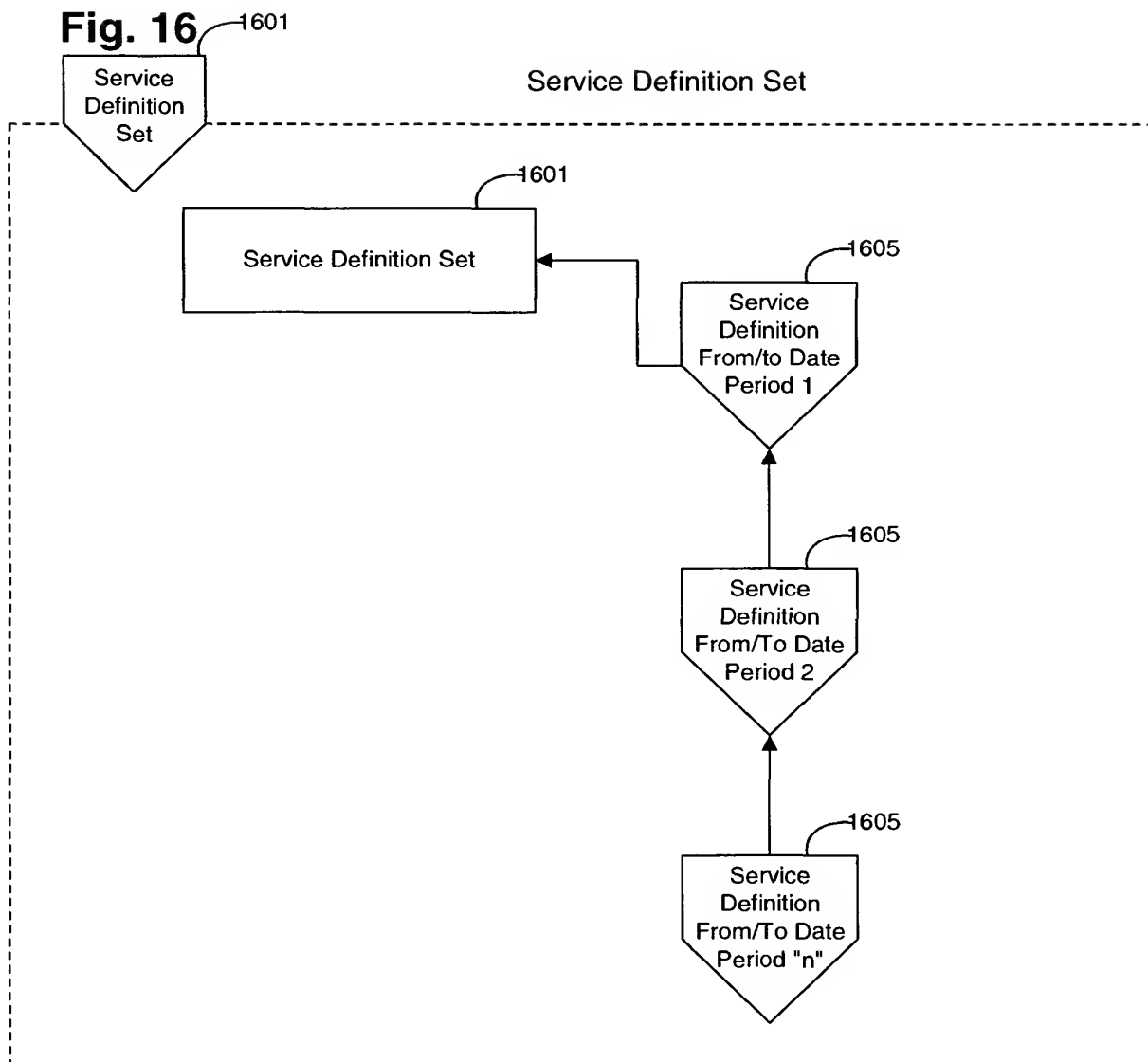
**Fig. 14**



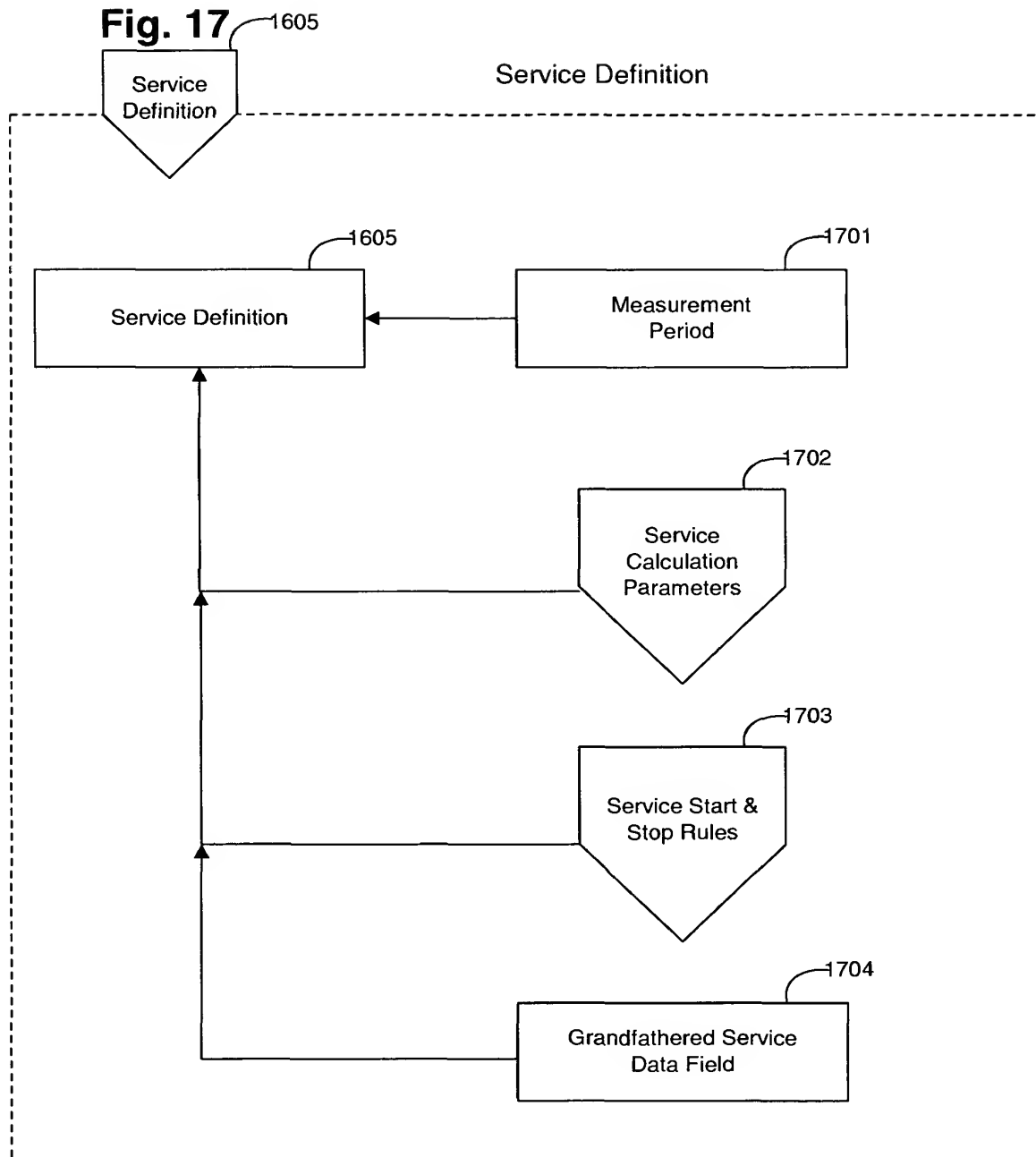
**Fig. 15**



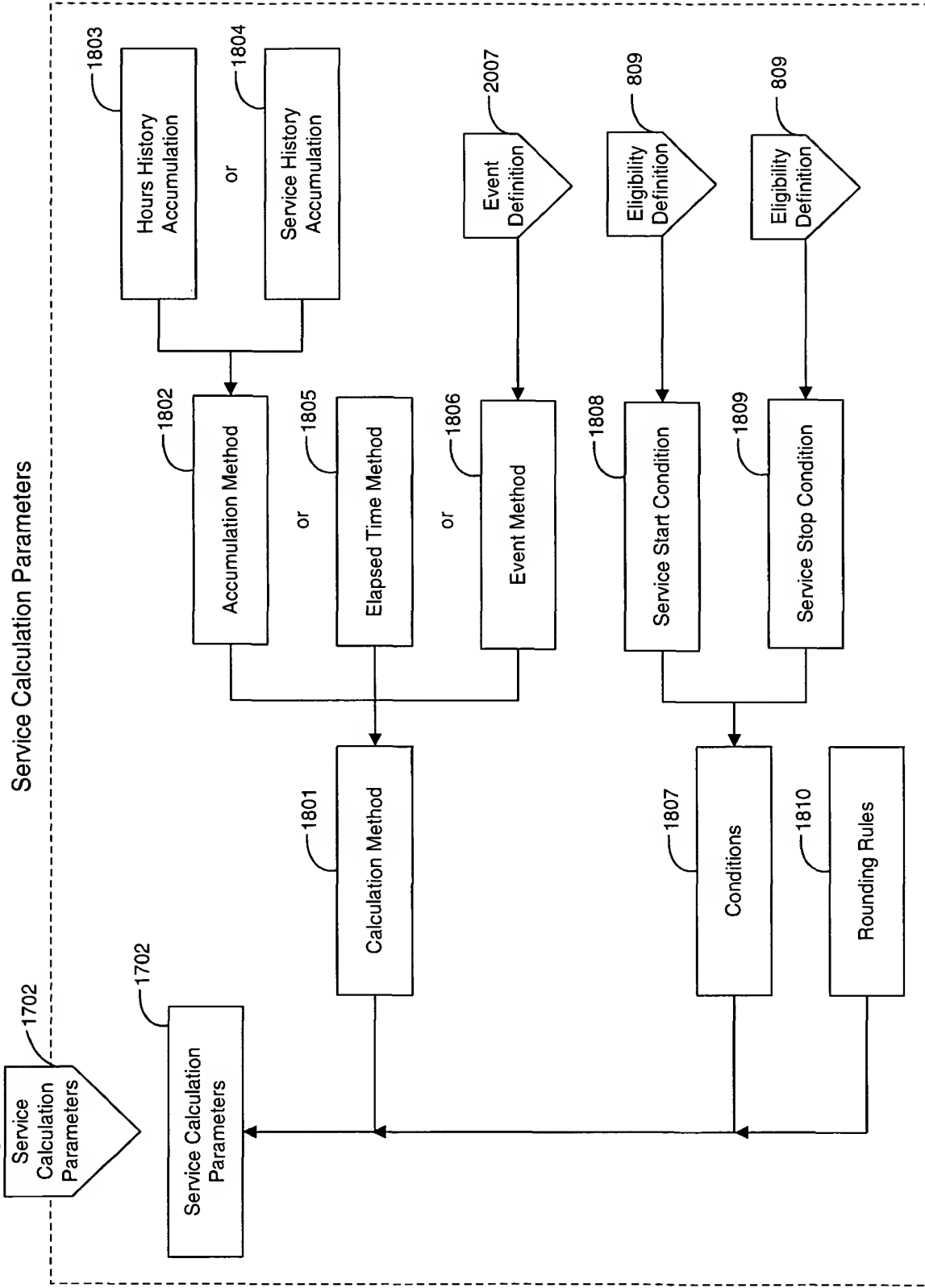
**Fig. 16**

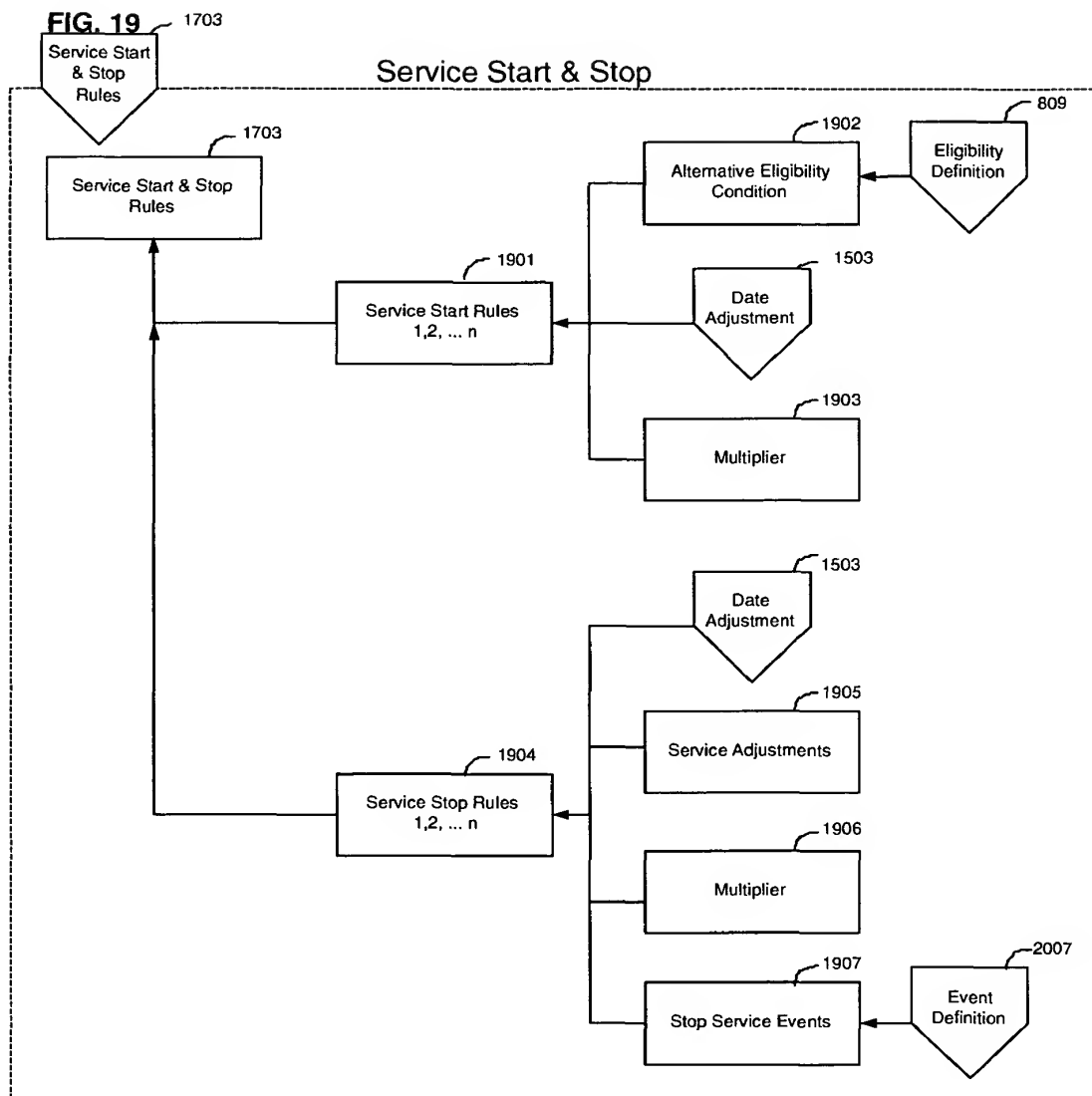


**Fig. 17**

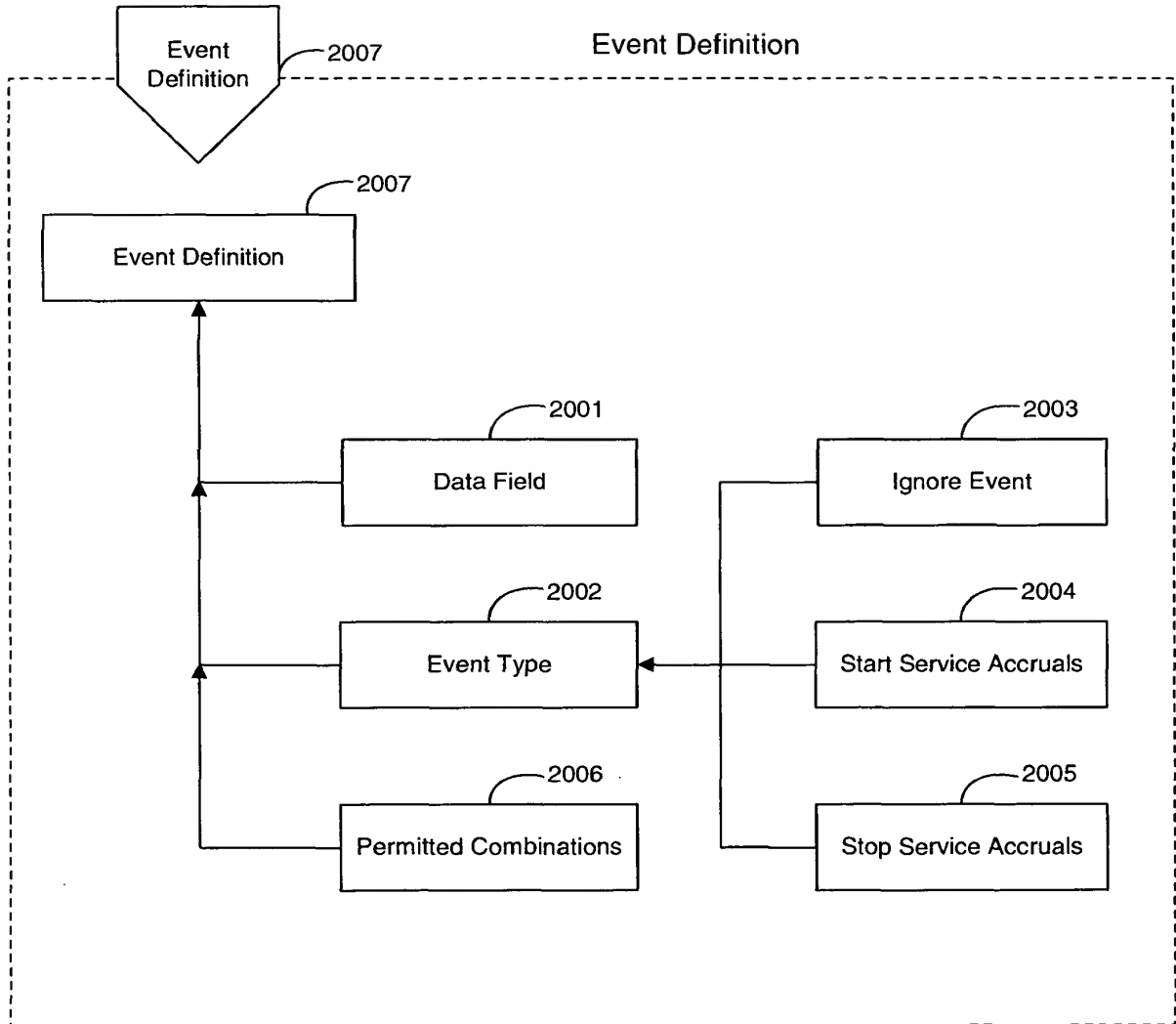


**Fig. 18**

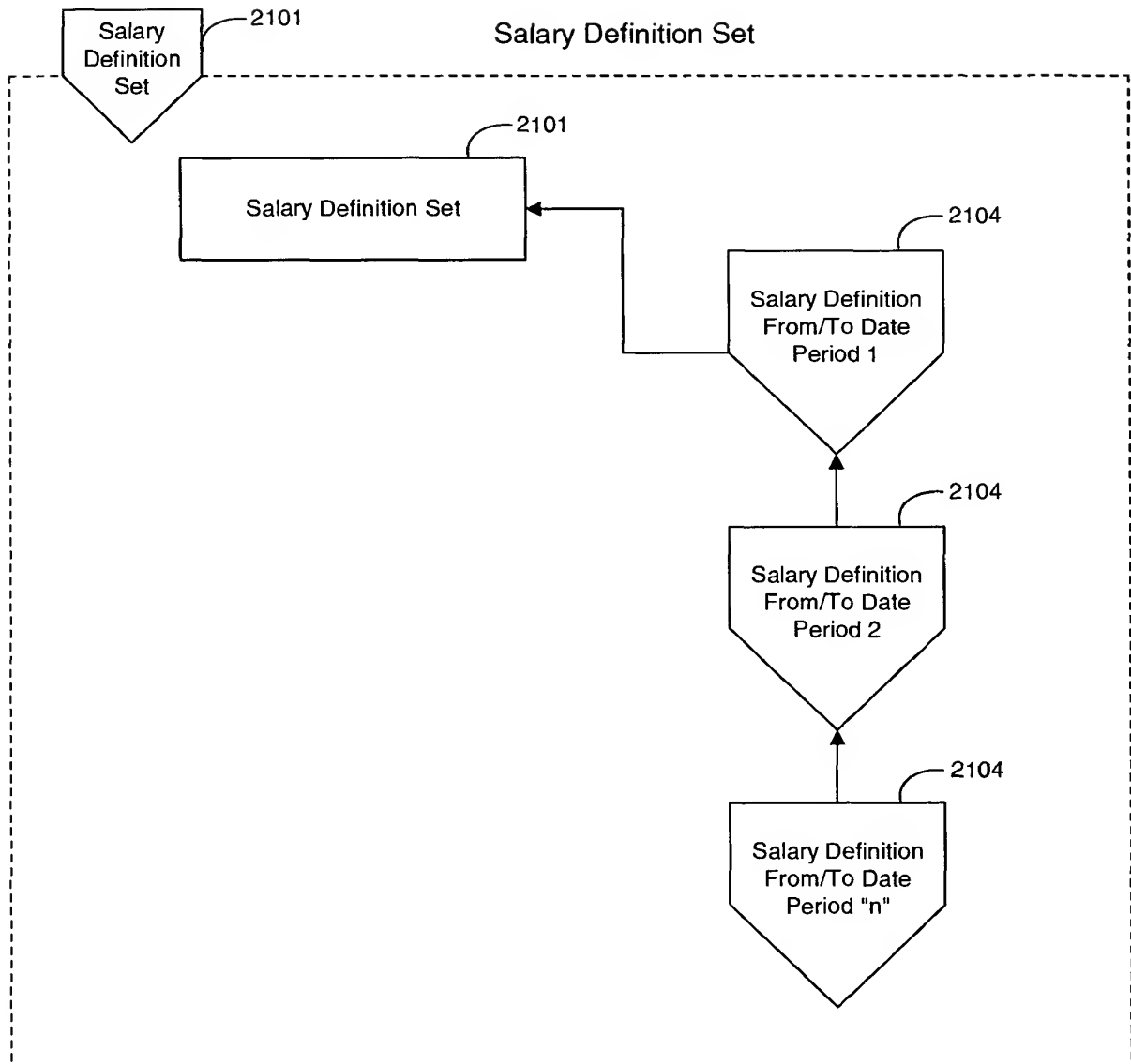




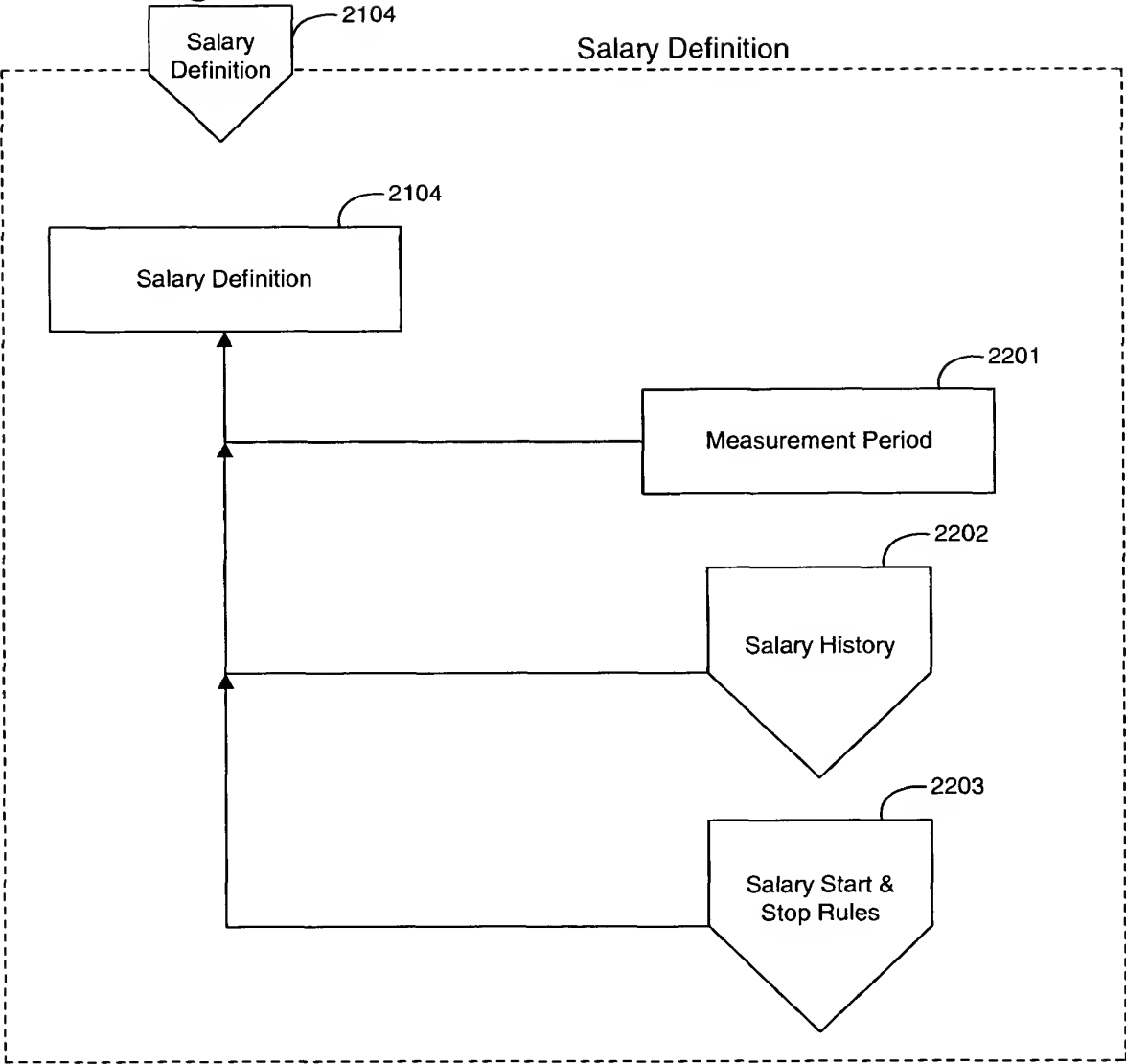
**Fig. 20**



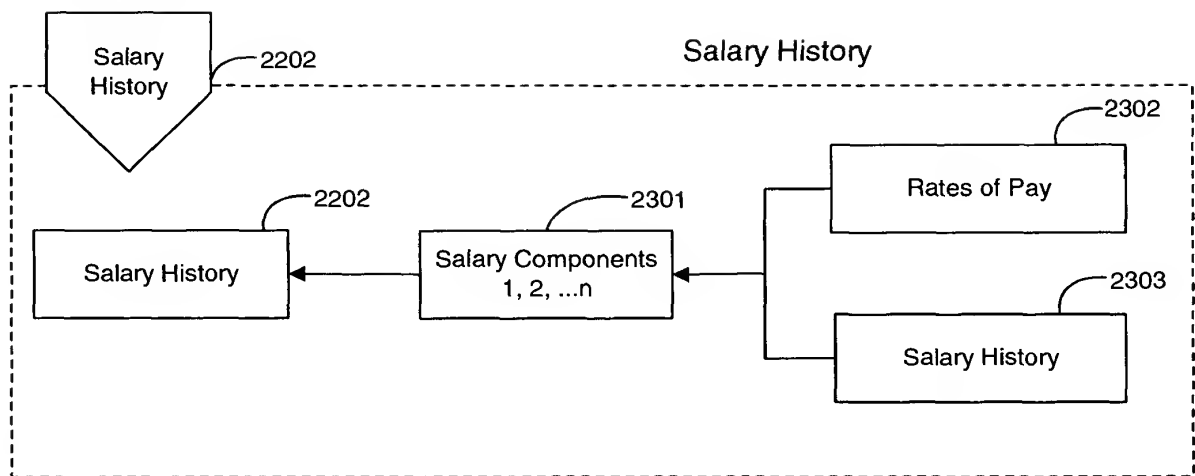
**Fig. 21**



**Fig. 22**

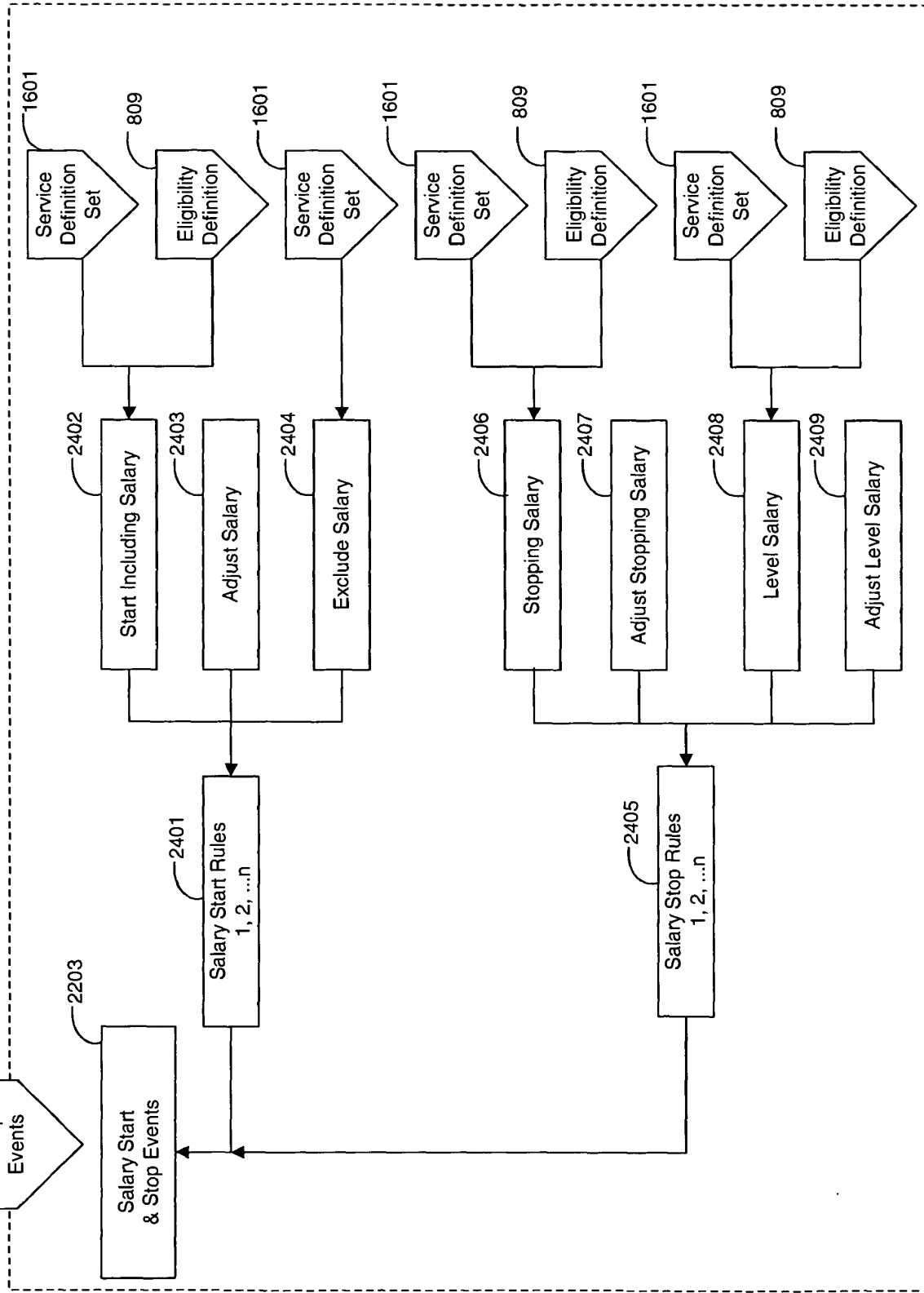


**Fig. 23**

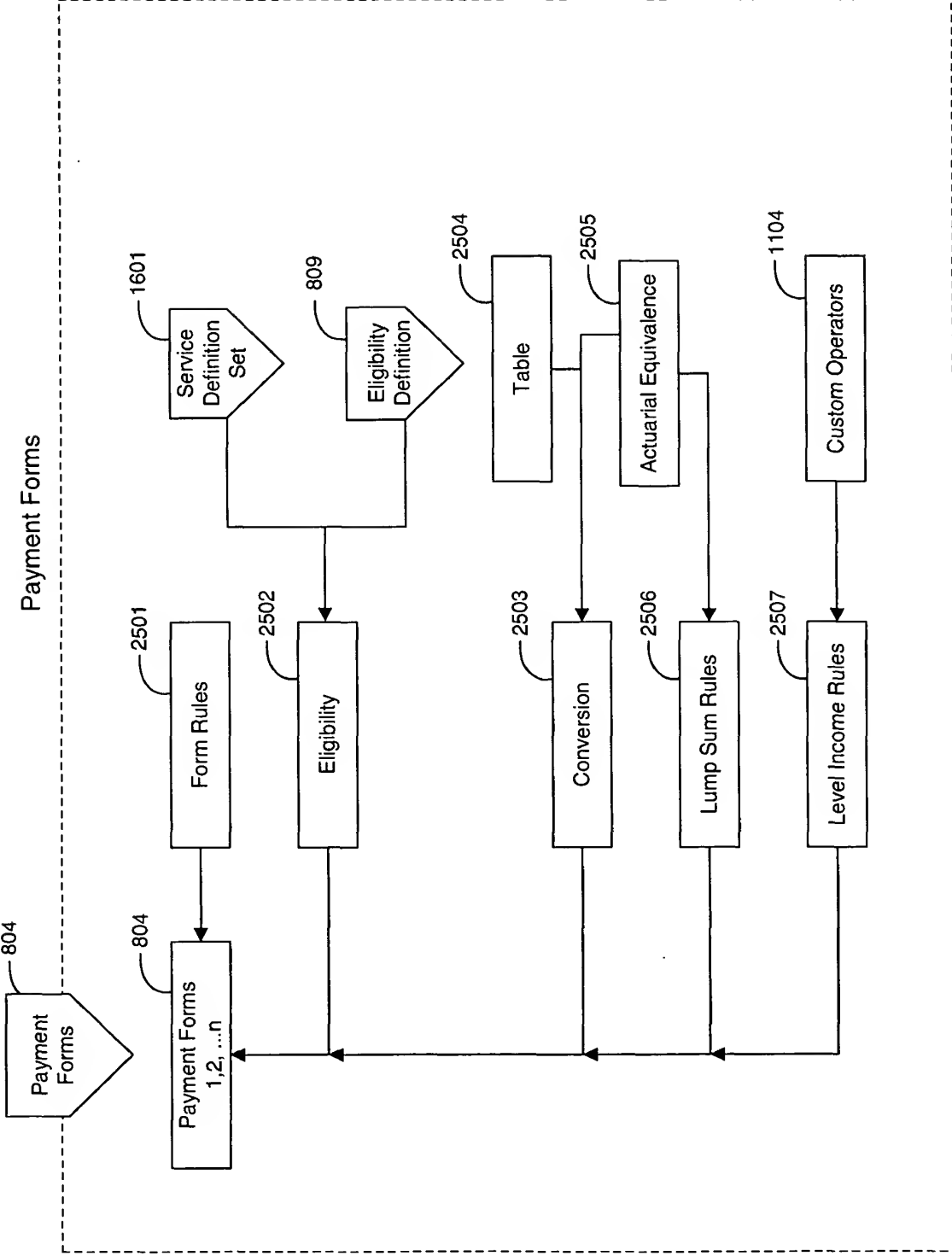


**Fig. 24**

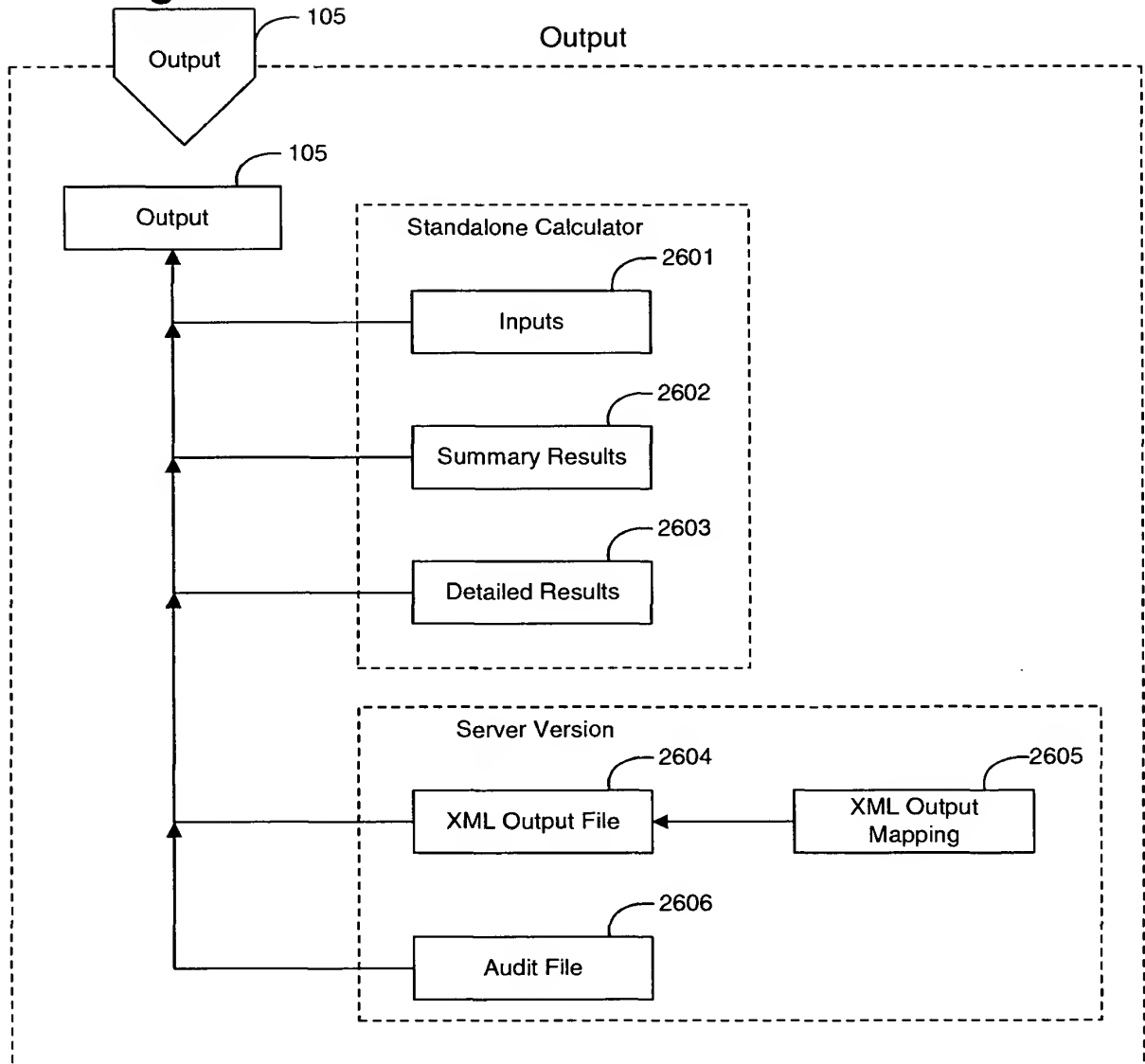
Salary Definition



**Fig. 25**



**Fig. 26**



Page 1  
May 5, 2003 10:40 AM

Name: demo2

```
System:    demo_plan_1
Project:   <ProAdmin>
Date Created: April 27, 2002  12:20 PM
Date Last Modified: May 5, 2003  10:39 AM
```

Person ID: 999887777  
Type of Calculation: one decrement date, multiple commencement dates/ages  
Decrement Date: 6/30/2002

Commencement Date(s): 7/01/2002

Commencement Age(s): 60y 0m  
65y 0m

Plan Definition: Plan Def Individual Calculations  
 Census Specifications: Census Specs Individual Calculations  
 Projection Assumptions: Proj Assump Individual Calculations  
     Do not override salary inflation assumption  
 Output Definition: Output Def Individual Calculations - Fulfillment

Person ID	999887777
Date of Birth	5/1/1942
Normal Retirement Date	5/1/2007
Social Security Normal Retirement Age	65y 10m
Beneficiary Date of Birth	5/1/1939
Beneficiary Type	Spouse

Benefit	Definition	values	as of	prior Plan	Year end	(12/31/2001):
Ret	- ACTIVES & NEW VT	.	.	.	.	21,851.1576
Ret	- ACTIVES & NEW VT	SBC	.	.	.	21,851.1576
Ret	- ACTIVES & NEW VT	Supp	.	.	.	500.0000
Ret	- PRIOR VT	.	.	.	.	N/A
Ret	- PRIOR VT	SBCO	.	.	.	N/A

Benefit-related values as of the Decrement Date:

Decrement Date . . . . .	6/30/2002
Attained age . . . . .	60y 1m

Benefit	Definition	value(s):
Ret -	ACTIVES & NEW VT	23,691.9286
Ret -	ACTIVES & NEW VT SBC	23,691.9286
Ret -	ACTIVES & NEW VT Supp	500.0000
Ret -	PRIOR VT	N/A
Ret -	PRIOR VT SBCO	N/A

Benefit Formula	Component	Values:
#MAXBEN*65		160,000.0000
BASE		23,691.9286
BENED		37,255.0000
Benedob		14,364.0000
Bentype		2.0000
DOB		15,460.0000
DOH		22,953.0000
ERF		1.0000
FAE		50,950.3840
SPHND01		0.0000
SPHND02		0.0000
SPHND03		0.0000
SPHND04		0.0000
SPHND05		0.0000
SPHND06		0.0000
SPHND07		0.0000
SPHND08		0.0000
SPHND09		0.0000
SPHND10		0.0000
SPHND11		0.0000
SPHND13		0.0000

**Fig. 27A**

SSN . . . . .	.99,887,777.0000		
STATUS . . . . .	10.0000		
STATUSSED . . . . .	22,953.0000		
SuppBen . . . . .	500.0000		
VEST . . . . .	1.0000		
VTBEN . . . . .	0.0000		
VTCSR . . . . .	0.0000		
VTVS . . . . .	0.0000		
Accrual Basis Component Values:			
5 #FAS_CUSTOM 10 . . . . .	50,950.384		
BENED . . . . .	37,255.000		
STATUS . . . . .	10.000		
STATUSSED . . . . .	22,953.000		
Benefit-related values as of Commencement Date(s):			
Commencement Date(s) . . . . .	7/01/2002	5/01/2007	
Attained age . . . . .	60y 2m	65y 0m	
Benefit Definition Value(s):			
Ret - ACTIVES & NEW VT . . . . .	23,691.93	23,691.93	
Ret - ACTIVES & NEW VT SBC . . . . .	23,691.93	23,691.93	
Ret - ACTIVES & NEW VT Supp . . . . .	500.00	500.00	
Ret - PRIOR VT . . . . .	N/A	N/A	
Ret - PRIOR VT SBCO . . . . .	N/A	N/A	
Benefit Formula Component Values:			
#MAXBEN'65 . . . . .	160,000.0000	160,000.0000	
BASE . . . . .	23,691.9286	23,691.9286	
BENED . . . . .	37,255.0000	37,255.0000	
Benedob . . . . .	14,364.0000	14,364.0000	
Bentype . . . . .	2.0000	2.0000	
DOB . . . . .	15,460.0000	15,460.0000	
DOH . . . . .	22,953.0000	22,953.0000	
ERF . . . . .	1.0000	1.0000	
FAE . . . . .	50,950.3840	50,950.3840	
SPHND01 . . . . .	0.0000	0.0000	
SPHND02 . . . . .	0.0000	0.0000	
SPHND03 . . . . .	0.0000	0.0000	
SPHND04 . . . . .	0.0000	0.0000	
SPHND05 . . . . .	0.0000	0.0000	
SPHND06 . . . . .	0.0000	0.0000	
SPHND07 . . . . .	0.0000	0.0000	
SPHND08 . . . . .	0.0000	0.0000	
SPHND09 . . . . .	0.0000	0.0000	
SPHND10 . . . . .	0.0000	0.0000	
SPHND11 . . . . .	0.0000	0.0000	
SPHND13 . . . . .	0.0000	0.0000	
SSN . . . . .	.99,887,777.0000	.99,887,777.0000	
STATUS . . . . .	10.0000	10.0000	
STATUSSED . . . . .	22,953.0000	22,953.0000	
SuppBen . . . . .	500.0000	500.0000	
VEST . . . . .	1.0000	1.0000	
VTBEN . . . . .	0.0000	0.0000	
VTCSR . . . . .	0.0000	0.0000	
VTVS . . . . .	0.0000	0.0000	
Accrual Basis Component Values:			
5 #FAS_CUSTOM 10 . . . . .	50,950.384	50,950.384	
BENED . . . . .	37,255.000	37,255.000	
STATUS . . . . .	10.000	10.000	
STATUSSED . . . . .	22,953.000	22,953.000	

**Fig. 27B**

Annual payment form values at Commencement Date(s):

Benefit Definition: Ret - ACTIVES & NEW VT		Primary Bft	Benef. Bft	Other Bft	Chg. Date
Commencement date:	7/1/2002				
Attained age:	60y 2m				
Life Annuity . . . . .		23,691.96	N/A	N/A	
50% Joint & Survivor . . . . .		21,891.36	10,945.68	N/A	
66 2/3% Joint & Survivor . . . . .		21,370.08	14,253.84	N/A	
100% Joint & Surviovr . . . . .		20,375.04	20,375.04	N/A	
Commencement date:	5/1/2007				
Attained age:	65y 0m				
Life Annuity . . . . .		23,691.96	N/A	N/A	
50% Joint & Survivor . . . . .		21,559.68	10,779.84	N/A	
66 2/3% Joint & Survivor . . . . .		20,943.72	13,969.44	N/A	
100% Joint & Surviovr . . . . .		19,806.48	19,806.48	N/A	
Benefit Definition: Ret - ACTIVES & NEW VT SBC		Primary Bft	Benef. Bft	Other Bft	Chg. Date
Commencement date:	5/1/2007				
Attained age:	65y 0m				
LIFE ANNUITY DEF TO 65 . . . . .		23,691.96	N/A	N/A	
Benefit Definition: Ret - ACTIVES & NEW VT Supp		Primary Bft	Benef. Bft	Other Bft	Chg. Date
Commencement date:	7/1/2002				
Attained age:	60y 2m				
Life Annuity Supp . . . . .		500.04	N/A	N/A	5/01/2004
50% Joint & Survivor Supp . . . . .		462.00	231.00	N/A	5/01/2004
66 2/3% Joint & Survivor Supp . . . . .		450.96	300.84	N/A	5/01/2000
100% Joint & Survivor Supp . . . . .		429.96	429.96	N/A	5/01/2004
Date/Age/Service output results:					
DOP . . . . .		1/01/1972			
NRD . . . . .		5/01/2007			
Ttoal Vesting Service Actives & New VT's . . . . .		39.667			
Total Credited Service Actives and New VT'S . . . . .		31.000			

Fig. 27C

Sample Life Output  
Page 1

May 5, 2003 10:44 AM

Reports Printed:

**Fig. 28A**

Input Data

Benefit Definition

Benefit: Ret - ACTIVES & NEW VT

Benefit Definition

Benefit: Ret - ACTIVES & NEW VT SBC

Benefit Definition

Benefit: Ret - ACTIVES & NEW VT Supp

Benefit Definition

Benefit: Ret - PRIOR VT

Benefit Definition

Benefit: Ret - PRIOR VT SBCO

Benefit Formula Component

Name: #MAXBEN 65

Benefit Formula Component

Name: BASE

Type: Accrual Definition

Benefit Formula Component

Name: DOB

Type: Database Field

Benefit Formula Component

Name: DOH

Type: Database Field

Benefit Formula Component

Name: ERF

Type: Table

Benefit Formula Component

Name: FAE

Type: Accrual Definition

Benefit Formula Component

Name: STATUS

Type: Database Field

Benefit Formula Component

Name: SUPPBEN

Type: Constant

Benefit Formula Component

Name: VEST

Type: Table

Benefit Formula Component

Name: VT BEN

Type: Database Field (expression)

Benefit Formula Component  
 Name: VTCRS  
 Type: Database Field (expression)

Benefit Formula Component  
 Name: VTVS  
 Type: Database Field (expression)

Accrual Definition Basis Formula  
 Name: BASE

Accrual Definition Basis Formula  
 Name: FAE

Accrual Basis Component  
 Name: 5 #FAS\_CUSTOM 10

Accrual Basis Component  
 Name: BENED

Accrual Basis Component  
 Name: STATUS

Accrual Basis Component  
 Name: STATUSED

415(b) Maximum Benefit Limit  
 Benefit: Ret - ACTIVES & NEW VT

415(b) Maximum Benefit Limit  
 Benefit: Ret - ACTIVES & NEW VT SBC

415(b) Maximum Benefit Limit  
 Benefit: Ret - ACTIVES & NEW VT Supp

415(b) Maximum Benefit Limit  
 Benefit: Ret - PRIOR VT

415(b) Maximum Benefit Limit  
 Benefit: Ret - PRIOR VT SBCO

Payment Form Value  
 Benefit: Ret - ACTIVES & NEW VT  
 Payment form: Life Annuity

Payment Form Value  
 Benefit: Ret - ACTIVES & NEW VT  
 Payment form: 50% Joint & Survivor

Payment Form Value  
 Benefit: Ret - ACTIVES & NEW VT  
 Payment form: 66 2/3% Joint & Survivor

Payment Form Value  
 Benefit: Ret - ACTIVES & NEW VT  
 Payment form: 100% Joint & Survivor

Payment Form Value  
 Benefit: Ret - ACTIVES & NEW VT SBC  
 Payment form: Lump Sum (SBCO)

**Fig. 28B**

Payment Form Value

Benefit: Ret - ACTIVES & NEW VT SBC  
Payment form: LIFE ANNUITY DEF TO 65

Payment Form Value

Benefit: Ret - ACTIVES & NEW VT Supp  
Payment form: Life Annuity Supp

Payment Form Value

Benefit: Ret - ACTIVES & NEW VT Supp  
Payment form: 50% Joint & Survivor Supp

Payment Form Value

Benefit: Ret - ACTIVES & NEW VT Supp  
Payment form: 66 2/3% Joint & Survivor Supp

Payment Form Value

Benefit: Ret - ACTIVES & NEW VT Supp  
Payment form: 100% Joint & Survivor Supp

Payment Form Value

Benefit: Ret - PRIOR VT  
Payment form: Life Annuity

Payment Form Value

Benefit: Ret - PRIOR VT  
Payment form: 50% Joint & Survivor

Payment Form Value

Benefit: Ret - PRIOR VT  
Payment form: 66 2/3% Joint & Survivor

Payment Form Value

Benefit: Ret - PRIOR VT  
Payment form: 100% Joint & Surviovr

Payment Form Value

Benefit: Ret - PRIOR VT SBCO  
Payment form: Lump Sum (SBCO)

Payment Form Value

Benefit: Ret - PRIOR VT SBCO  
Payment form: LIFE ANNUITY DEF TO 65

Service Definition

Name: Vested Service - Elapsed Time

Service Definition

Name: Vested Service - Elapsed Time (Base svc)

Service Definition

Name: Elapsed Svc Completed Months for FAE

Service Definition

Name: Credited Service - Elapsed Time

Service Definition

Name: Credited Service - Reported Hours

Service Definition

Name: Vesting Service For Prior VT's

**Fig. 28C**

Service Definition Set  
Name: VESTED SERVICE - Elapsed Time (Base Service Set)

Service Definition Set  
Name: VESTED SERVICE - For NRD

Service Definition Set  
Name: Elapsed for FAE Gross-Up (Completed Months)

Service Definition Set  
Name: CREDITED SERVICE - ELASPED/REPORTED

Service Definition Set  
Name: VESTED SERVICE FOR PRIOR VT'S FOR FULLFILLMENT

Salary Definition  
Name: Base Pay

Salary Definition Set  
Name: Base Pay (Base Salary Set)  
AA

Estimate: demo2  
Client: demo\_plan\_1  
Project: <ProAdmin>  
Run Date: May 5, 2003 10:44 AM

Person ID: 999887777  
Plan Definition: Plan Def Individual Calculations  
Census Specifications: Census Specs Individual Calculations  
Projection Assumptions: Proj Assump Individual Calculations

Input Data  
Page 2

May 5, 2003 10:44 AM

```
UAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA;
3                               3      PersonID: 999887777          3
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
3 BeneDOB                      3      05/01/1939                  3
3 BenHistEffDte                3      1/01/2002 01/01/2002      3
3 Bentye                       3      Spouse                     3
3 CSBreakUnit                  3      12/31/1991 0                3
3                               3      12/31/1993 0                3
3                               3      12/31/1994 0                3
3                               3      12/31/1995 0                3
3                               3      12/31/1996 0                3
3                               3      12/31/1997 0                3
3                               3      12/31/1998 0                3
3                               3      12/31/1999 0                3
3                               3      12/31/2000 0                3
3                               3      12/31/2001 0                3
3 CSD                          3      01/01/1972                  3
3 CSHist                       3      12/31/2001 29                3
3 DOB                          3      05/01/1942                  3
3 DOH                          3      11/05/1962                  3
3 DOP                          3      01/01/1972                  3
3 ERD                          3      *01/01/4000                  3
3 Hours                        3      1/01/1993 12/31/1993 2,094    3
3                               3      1/01/1994 12/31/1994 2,133    3
3                               3      1/01/1995 12/31/1995 1,993    3
3                               3      1/01/1996 12/31/1996 2,168    3
```

Fig. 28D

3		3	1/01/1997	12/31/1997	2,270	3
3		3	1/01/1998	12/31/1998	2,207	3
3		3	1/01/1999	12/31/1999	2,134	3
3		3	1/01/2000	12/31/2000	2,080	3
3		3	1/01/2001	12/31/2001	2,080	3
3	PayBase	3	1/01/1982	12/31/1982	13,514.95	3
3		3	1/01/1983	12/31/1983	13,152.20	3
3		3	1/01/1984	12/31/1984	14,328.81	3
3		3	1/01/1985	12/31/1985	16,485.08	3
3		3	1/01/1986	12/31/1986	20,335.74	3
3		3	1/01/1987	12/31/1987	22,264.38	3
3		3	1/01/1988	12/31/1988	27,379.28	3
3		3	1/01/1989	12/31/1989	35,552.52	3
3		3	1/01/1990	12/31/1990	36,726.01	3
3		3	1/01/1991	12/31/1991	37,046.31	3
3		3	1/01/1992	12/31/1992	31,493.88	3
3		3	1/01/1993	12/31/1993	34,171.17	3
3		3	1/01/1994	12/31/1994	37,028.50	3
3		3	1/01/1995	12/31/1995	36,952.60	3
3		3	1/01/1996	12/31/1996	40,562.01	3
3		3	1/01/1997	12/31/1997	44,194.72	3
3		3	1/01/1998	12/31/1998	44,643.56	3
3		3	1/01/1999	12/31/1999	47,545.96	3
3		3	1/01/2000	12/31/2000	50,250.40	3
3		3	1/01/2001	12/31/2001	56,156.00	3
3	Sex	3	Female			3
3	SHCode01	3	*0			3
3	SHCode02	3	*0			3
3	SHCode03	3	*0			3
3	SHCode04	3	*0			3
3	SHCode05	3	*0			3
3	SHCode06	3	*0			3
3	SHCode07	3	*0			3
3	SHCode08	3	*0			3
3	SHCode09	3	*0			3
3	SHCode10	3	*0			3
3	SHCode11	3	*0			3
3	SHCode13	3	*0			3
3	SSN	3	99,887,777			3
3	StatEffDate	3	11/05/1962	11/05/1962		3
3	Status	3	11/05/1962	Active		3
3	StatusHistory	3	11/05/1962	10		3
3	VestBen	3	1/01/2002	21,122.79		3
3	VSBreakUnit	3	12/31/1991	0		3
3		3	12/31/1993	0		3
3		3	12/31/1994	0		3
3		3	12/31/1995	0		3
3		3	12/31/1996	0		3
3		3	12/31/1997	0		3
3		3	12/31/1998	0		3
3		3	12/31/1999	0		3
3		3	12/31/2000	0		3
3		3	12/31/2001	0		3
3	VSD	3	11/05/1962			3
3	VSHist	3	12/31/2001	39.17		3
AAUU						
* = Default value						

**Fig. 28E**

12345\*002 2002-07-02-11.47.14.155000

Fig. 29A

Date Created: May 5, 2003 10:59 AM  
Date Last Modified: May 5, 2003 10:59 AM  
Type of Calculation: one decrement date, multiple commencement dates/ages  
Decrement Date: 6/30/2002

Commencement Date(s): 7/01/2002  
5/01/2004  
5/01/2007

Commencement Age(s): <unspecified>

Plan Definition: Plan Def Individual Calculations  
Census Specifications: Census Specs Individual Calculations  
Projection Assumptions: Proj Assump Individual Calculations  
Do not override salary inflation assumption  
Output Definition: Output Def Individual Calculations - Fulfillment

Person ID . . . . . 999887777  
Date of Birth . . . . . 5/1/1942  
Normal Retirement Date . . . . . 5/1/2007  
Social Security Normal Retirement Age . . . . . 65y 10m  
Beneficiary Date of Birth . . . . . 5/1/1939  
Beneficiary Type . . . . . Spouse

Benefit Definition values as of prior Plan Year end (12/31/2001):  
Ret - ACTIVES & NEW VT . . . . . 21,851.1576  
Ret - ACTIVES & NEW VT SBC . . . . . 21,851.1576  
Ret - ACTIVES & NEW VT Supp . . . . . 500.0000  
Ret - PRIOR VT . . . . . N/A  
Ret - PRIOR VT SBCO . . . . . N/A

Benefit-related values as of the Decrement Date:  
Decrement Date . . . . . 6/30/2002  
Attained age . . . . . 60y 1m

Benefit Definition Value(s):  
Ret - ACTIVES & NEW VT . . . . . 23,691.9286  
Ret - ACTIVES & NEW VT SBC . . . . . 23,691.9286  
Ret - ACTIVES & NEW VT Supp . . . . . 500.0000  
Ret - PRIOR VT . . . . . N/A  
Ret - PRIOR VT SBCO . . . . . N/A

Benefit Formula Component Values:  
#MAXBEN\*65 . . . . . 160,000.0000  
BASE . . . . . 23,691.9286  
BENED . . . . . 37,254.0000  
Benedob . . . . . 14,364.0000  
Bentype . . . . . 2.0000  
DOB . . . . . 15,460.0000  
DOH . . . . . 22,953.0000  
ERF . . . . . 1.0000  
FAE . . . . . 50,950.3840  
SPHND01 . . . . . 0.0000  
SPHND02 . . . . . 0.0000  
SPHND03 . . . . . 0.0000  
SPHND04 . . . . . 0.0000  
SPHND05 . . . . . 0.0000  
SPHND06 . . . . . 0.0000  
SPHND07 . . . . . 0.0000  
SPHND08 . . . . . 0.0000  
SPHND09 . . . . . 0.0000  
SPHND10 . . . . . 0.0000  
SPHND11 . . . . . 0.0000  
SPHND13 . . . . . 0.0000  
SSN . . . . . 99,887,777.0000  
STATUS . . . . . 10.0000  
STATUSED . . . . . 22,953.0000  
SuppBen . . . . . 500.0000  
VEST . . . . . 1.0000  
VTBEN . . . . . 0.0000  
VTCRS . . . . . 0.0000  
VTVS . . . . . 0.0000

Accrual Basis Component Values:  
5 #FAS\_CUSTOM 10 . . . . . 50,950.384  
BENED . . . . . 37,254.000  
STATUS . . . . . 10.000  
STATUSED . . . . . 22,953.000

Benefit-related values as of Commencement Date(s):			
Commencement Date(s)	7/01/2002	5/01/2004	5/01/2007
Attained age	60y 2m	62y 0m	65y 0m
Benefit Definition Value(s):			
Ret - ACTIVES & NEW VT	23,691.93	23,691.93	23,691.93
Ret - ACTIVES & NEW VT SBC	23,691.93	23,691.93	23,691.93
Ret - ACTIVES & NEW VT Supp	500.00	500.00	500.00
Ret - PRIOR VT	N/A	N/A	N/A
Ret - PRIOR VT SBCO	N/A	N/A	N/A
Benefit Formula Component Values:			
#MAXBEN'65	160,000.0000	160,000.0000	160,000.0000
BASE	23,691.9286	23,691.9286	23,691.9286
BENED	37,254.0000	37,254.0000	37,254.0000
Benedob	14,364.0000	14,364.0000	14,364.0000
Bentype	2.0000	2.0000	2.0000
DOB	15,460.0000	15,460.0000	15,460.0000
DOH	22,953.0000	22,953.0000	22,953.0000
ERF	1.0000	1.0000	1.0000
FAE	50,950.3840	50,950.3840	50,950.3840
SPHND01	0.0000	0.0000	0.0000
SPHND02	0.0000	0.0000	0.0000
SPHND03	0.0000	0.0000	0.0000
SPHND04	0.0000	0.0000	0.0000
SPHND05	0.0000	0.0000	0.0000
SPHND06	0.0000	0.0000	0.0000
SPHND07	0.0000	0.0000	0.0000
SPHND08	0.0000	0.0000	0.0000
SPHND09	0.0000	0.0000	0.0000
SPHND10	0.0000	0.0000	0.0000
SPHND11	0.0000	0.0000	0.0000
SPHND13	0.0000	0.0000	0.0000
SSN	99,887,777.0000	99,887,777.0000	99,887,777.0000
STATUS	10.0000	10.0000	10.0000
STATUSD	22,953.0000	22,953.0000	22,953.0000
SuppBen	500.0000	500.0000	500.0000
VEST	1.0000	1.0000	1.0000
VTBEN	0.0000	0.0000	0.0000
VTCSR	0.0000	0.0000	0.0000
VTVS	0.0000	0.0000	0.0000
Accrual Basis Component Values:			
5 #FAS_CUSTOM 10	50,950.384	50,950.384	50,950.384
BENED	37,254.000	37,254.000	37,254.000
STATUS	10.000	10.000	10.000
STATUSD	22,953.000	22,953.000	22,953.000

Annual payment form values at Commencement Date(s):

Benefit Definition:	Ret - ACTIVES & NEW VT	Primary Bft	Benef. Bft	Other Bft	Chg. Date
Commencement date:	7/1/2002				
Attained age:	60y 2m				
Life Annuity		23,691.96	N/A	N/A	
50% Joint & Survivor		21,891.36	10,945.68	N/A	
66 2/3% Joint & Survivor		21,370.08	14,253.84	N/A	
100% Joint & Surviovr		20,375.04	20,375.04	N/A	
Commencement date:	5/1/2004				
Attained age:	62y 0m				
Life Annuity		23,691.96	N/A	N/A	
50% Joint & Survivor		21,796.56	10,898.28	N/A	
66 2/3% Joint & Survivor		21,251.64	14,174.88	N/A	
100% Joint & Surviovr		20,209.20	20,209.20	N/A	
Commencement date:	5/1/2007				
Attained age:	65y 0m				
Life Annuity		23,691.96	N/A	N/A	
50% Joint & Survivor		21,559.68	10,779.84	N/A	
66 2/3% Joint & Survivor		20,943.72	13,969.44	N/A	
100% Joint & Surviovr		19,806.48	19,806.48	N/A	

**Fig. 29B**

Benefit Definition: Ret - ACTIVES & NEW VT SBC				Primary Bft	Benef. Bft	Other Bft	Chg. Date
Commencement date: 5/1/2007							
Attained age: 65y 0m							
LIFE ANNUITY DEF TO 65 . . . . .				23,691.96	N/A	N/A	

Benefit Definition: Ret - ACTIVES & NEW VT Supp				Primary Bft	Benef. Bft	Other Bft	Chg. Date
Commencement date: 7/1/2002							
Attained age: 60y 2m							
Life Annuity Supp . . . . .				500.04	N/A	N/A	5/01/2004
50% Joint & Survivor Supp . . . . .				462.00	231.00	N/A	5/01/2004
66 2/3% Joint & Survivor Supp . . . . .				450.96	300.84	N/A	5/01/2004
100% Joint & Survivor Supp . . . . .				429.96	429.96	N/A	5/01/2004

Date/Age/Service output results:				
DOP . . . . .				1/01/1972
NRD . . . . .				5/01/2007
Ttotal Vesting Service Actives & New VT's . . . . .				39.667
Total Credited Service Actives and New VT's . . . . .				31.000

Status	11/05/1962	Active
DOB	05/01/1942	
DOH	11/05/1962	
Sex	Female	
Bentype	Spouse	
BeneDOB	05/01/1939	
StatusHistory	11/05/1962	10
StatEffDate	11/05/1962	11/05/1962
BenHistEffDte	12/31/2001	12/31/2001
VSD	11/05/1962	
VSBreakUnit	12/31/1991	0
	12/31/1993	0
	12/31/1994	0
	12/31/1995	0
	12/31/1996	0
	12/31/1997	0
	12/31/1998	0
	12/31/1999	0
	12/31/2000	0
	12/31/2001	0
PayBase	1/01/1982	12/31/1982 13,514.95
	1/01/1983	12/31/1983 13,152.20
	1/01/1984	12/31/1984 14,328.81
	1/01/1985	12/31/1985 16,485.08
	1/01/1986	12/31/1986 20,335.74
	1/01/1987	12/31/1987 22,264.38
	1/01/1988	12/31/1988 27,379.28
	1/01/1989	12/31/1989 35,552.52
	1/01/1990	12/31/1990 36,726.01
	1/01/1991	12/31/1991 37,046.31
	1/01/1992	12/31/1992 31,493.88
	1/01/1993	12/31/1993 34,171.17
	1/01/1994	12/31/1994 37,028.50
	1/01/1995	12/31/1995 36,952.60
	1/01/1996	12/31/1996 40,562.01
	1/01/1997	12/31/1997 44,194.72
	1/01/1998	12/31/1998 44,643.56
	1/01/1999	12/31/1999 47,545.96
	1/01/2000	12/31/2000 50,250.40
	1/01/2001	12/31/2001 56,156.00
CSD	01/01/1972	
CSBreakUnit	12/31/1991	0
	12/31/1993	0
	12/31/1994	0
	12/31/1995	0
	12/31/1996	0
	12/31/1997	0
	12/31/1998	0
	12/31/1999	0
	12/31/2000	0
	12/31/2001	0
Hours	1/01/1993	12/31/1993 2,094

**Fig. 29C**

```

1/01/1994 12/31/1994 2,133
1/01/1995 12/31/1995 1,993
1/01/1996 12/31/1996 2,168
1/01/1997 12/31/1997 2,270
1/01/1998 12/31/1998 2,207
1/01/1999 12/31/1999 2,134
1/01/2000 12/31/2000 2,080
1/01/2001 12/31/2001 2,080
VSHist 12/31/2001 39.17
ERD *01/01/4000
SHCode01 *0
SHCode02 *0
SHCode03 *0
SHCode04 *0
SHCode05 *0
SHCode06 *0
SHCode07 *0
SHCode08 *0
SHCode09 *0
SHCode10 *0
SHCode11 *0
SHCode13 *0
SSN 99,887,777
VestBen 1/01/2002 21,851.16
CSHist 12/31/2001 30
DOP 01/01/1972
* = Default value

```

**Fig. 29D**

```

Benefit: VS := VTVS &
CRS := VTCRS &
BIRTHDATE := DOB &
HIREDATE := DOH &

```

```

VTBEN * ERF
Expression: PRIOR VT

```

```

Benefit: BASE * ERF * VEST

```

```

; BASE is 1.5% of FAE time service
; ERF is the early retirement factor table
; VEST is the vesting schedule
Expression: ACTIVES & NEW VT

```

```

Benefit: FAS := FAE &
STAT := STATUS &

```

```

BASE #min (#maxben 65)
Expression: ACTIVES & NEW VT SBC

```

```

Benefit: VTBEN #min (#maxben 65)
Expression: PRIOR VT SBCO

```

```

Benefit: BIRTHDATE := DOB &
HIREDATE := DOH &

```

```

SuppBen
Expression: ACTIVES & NEW VT Supp

```

-----

Accrual Basis Component: 5'#FAS\_CUSTOM'10

Date	Age	Salary per Definition	401(a) Maximum	Limited Salary	Averag- ing Period	Consid- ered Period	Final Average Salary
12/31/1960	18y 8m	0.00	150,000.00	0.00	0.000000	0.000000	0.00
12/31/1961	19y 8m	0.00	150,000.00	0.00	0.000000	0.000000	0.00
12/31/1962	20y 8m	0.00	150,000.00	0.00	0.000000	0.000000	0.00
12/31/1963	21y 8m	0.00	150,000.00	0.00	0.000000	0.000000	0.00
12/31/1964	22y 8m	0.00	150,000.00	0.00	0.000000	0.000000	0.00
12/31/1965	23y 8m	0.00	150,000.00	0.00	0.000000	0.000000	0.00
12/31/1966	24y 8m	0.00	150,000.00	0.00	0.000000	0.000000	0.00
12/31/1967	25y 8m	0.00	150,000.00	0.00	0.000000	0.000000	0.00
12/31/1968	26y 8m	0.00	150,000.00	0.00	0.000000	0.000000	0.00

12/31/1969	27y	8m	0.00	150,000.00	0.00	0.000000	0.000000	0.00
12/31/1970	28y	8m	0.00	150,000.00	0.00	0.000000	0.000000	0.00
12/31/1971	29y	8m	0.00	150,000.00	0.00	0.000000	0.000000	0.00
12/31/1972	30y	8m	0.00	150,000.00	0.00	0.000000	0.000000	0.00
12/31/1973	31y	8m	0.00	150,000.00	0.00	0.000000	0.000000	0.00
12/31/1974	32y	8m	0.00	150,000.00	0.00	0.000000	0.000000	0.00
12/31/1975	33y	8m	0.00	150,000.00	0.00	0.000000	0.000000	0.00
12/31/1976	34y	8m	0.00	150,000.00	0.00	0.000000	0.000000	0.00
12/31/1977	35y	8m	0.00	150,000.00	0.00	0.000000	0.000000	0.00
12/31/1978	36y	8m	0.00	150,000.00	0.00	0.000000	0.000000	0.00
12/31/1979	37y	8m	0.00	150,000.00	0.00	0.000000	0.000000	0.00
12/31/1980	38y	8m	0.00	150,000.00	0.00	0.000000	0.000000	0.00
12/31/1981	39y	8m	0.00	150,000.00	0.00	0.000000	0.000000	0.00
12/31/1982	40y	8m	13,514.95	150,000.00	13,514.95	1.000000	1.000000	13,514.95
12/31/1983	41y	8m	13,152.20	150,000.00	13,152.20	2.000000	2.000000	13,333.58
12/31/1984	42y	8m	14,328.81	150,000.00	14,328.81	3.000000	3.000000	13,665.32
12/31/1985	43y	8m	16,485.08	150,000.00	16,485.08	4.000000	4.000000	14,370.26
12/31/1986	44y	8m	20,335.74	150,000.00	20,335.74	5.000000	5.000000	15,563.36
12/31/1987	45y	8m	22,264.38	150,000.00	22,264.38	5.000000	6.000000	17,385.79
12/31/1988	46y	8m	27,379.28	150,000.00	27,379.28	5.000000	7.000000	20,158.66
12/31/1989	47y	8m	35,552.52	150,000.00	35,552.52	5.000000	8.000000	24,403.40
12/31/1990	48y	8m	36,726.01	150,000.00	36,726.01	5.000000	9.000000	28,451.59
12/31/1991	49y	8m	37,046.31	150,000.00	37,046.31	5.000000	10.000000	31,793.70
12/31/1992	50y	8m	31,493.88	150,000.00	31,493.88	5.000000	10.000000	33,639.60
12/31/1993	51y	8m	34,171.17	150,000.00	34,171.17	5.000000	10.000000	34,997.98
12/31/1994	52y	8m	37,028.50	150,000.00	37,028.50	5.000000	10.000000	36,104.90
12/31/1995	53y	8m	36,952.60	150,000.00	36,952.60	5.000000	10.000000	36,661.19
12/31/1996	54y	8m	40,562.01	150,000.00	40,562.01	5.000000	10.000000	37,663.09
12/31/1997	55y	8m	44,194.72	160,000.00	44,194.72	5.000000	10.000000	39,156.83
12/31/1998	56y	8m	44,643.56	160,000.00	44,643.56	5.000000	10.000000	40,695.02
12/31/1999	57y	8m	47,545.96	160,000.00	47,545.96	5.000000	10.000000	42,798.51
12/31/2000	58y	8m	50,250.40	170,000.00	50,250.40	5.000000	10.000000	45,439.33
12/31/2001	59y	8m	56,156.00	170,000.00	56,156.00	5.000000	10.000000	48,558.13
6/30/2002	60y	1m	56,156.00	200,000.00	56,156.00	5.000000	10.000000	50,950.38
7/01/2002	60y	2m	56,156.00	200,000.00	56,156.00	5.000000	10.000000	50,950.38
12/31/2002	60y	8m	56,156.00	200,000.00	56,156.00	5.000000	10.000000	50,950.38
12/31/2003	61y	8m	0.00	200,000.00	0.00	5.000000	10.000000	50,950.38
5/01/2004	62y	0m	0.00	200,000.00	0.00	5.000000	10.000000	50,950.38
12/31/2004	62y	8m	0.00	200,000.00	0.00	5.000000	10.000000	50,950.38
12/31/2005	63y	8m	0.00	200,000.00	0.00	5.000000	10.000000	50,950.38
12/31/2006	64y	8m	0.00	200,000.00	0.00	5.000000	10.000000	50,950.38
5/01/2007	65y	0m	0.00	200,000.00	0.00	5.000000	10.000000	50,950.38
12/31/2007	65y	8m	0.00	200,000.00	0.00	5.000000	10.000000	50,950.38
12/31/2008	66y	8m	0.00	200,000.00	0.00	5.000000	10.000000	50,950.38

```
Included salary definition set(s):
UAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
3      Salary Definition Set      3 Multiplier 3
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
3{<Base salary set>}              3      1
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAU
    <Base salary set>      = Base Pay

Averaging period      = 5 years
Considered period     = 10 years
Non-consecutive years? = yes
End of averaging period = current salary
```

Fig. 29E